Video Server Control Software

VENICE

Client Software

User Guide

VENICE Client Software User Guide

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User Guide Version 2.5 for the VENICE Client Software Version 2.5

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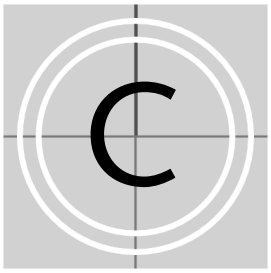

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Introduction

This document describes how to use the software delivered with VENICE, the multi-channel video server manufactured by DVS.

VENICE is a highly flexible server system for capturing and playing out audio and video content. Especially designed for broadcast workflows, it provides multiple independent channels and supports natively the most common compressed formats. With VENICE you can easily capture live content, e.g. from cameras directly, and access data for play-out operations – if required both at the same time and in the format that suits your workflow best. During each operation you can control an externally connected device via RS-422 to act as a player or recorder, either in a manual or autoedit operation mode.

To control the hardware of VENICE the VENICE client software is required. It is a comprehensive and intuitive application that can be used either on the server locally (Linux version) or on any network client (Linux, Mac, Windows) connected to the server. With this you can place the hardware of VENICE at any location you like and still have full control over it. With one instance of the software you can control different video channels of one or more VENICE servers at the same time and even perform multi-device operations with channel groups. However, you can also run several instances of the software in parallel, for example, to have them side-by-side on the desktop.

1.1 Overview

This user guide informs you about the general handling of the VENICE software as well as about its complete controllable interface.

The chapters in this user guide contain the following information:

Chapter 1	Begins with a short introduction to VENICE and its software, followed by a note regarding the audience this manual is written for and an explanation of the conventions used in this manual. Additionally, it provides important notes that you should read.
Chapter 2	This chapter contains basic information about the VENICE client software. In addition to the information how to start and exit the program, this chapter describes the steps to get started with the software. Furthermore, this chapter provides some general useful information.
Chapter 3	Describes the features of the channel administration tab and how to form channel groups to control two or more video channels simultaneously from a single tab.
Chapter 4	Describes how to play out clips with the VENICE client software.
Chapter 5	How to record clips with the VENICE client software is described in this chapter.
Chapter 6	Describes how to transcode clips with the VENICE client software.
Chapter 7	Provides information about the tools to, for example, administer lists or adapt the streamed audio heard at your workstation.
Chapter 8	Provides information about the individual menu options of the menu bar of the software.
Appendix	Gives additional information about the software. Among others you can find here lists of the available keyboard shortcuts and the supported file formats.
Index	This chapter facilitates the search for specific terms.

1.2 Target Group

To use this user guide and the DVS software correctly you should have experience in handling PCs and working with the respective operating system where the software is installed. If you want to use the software and the DVS system to its full potential, you should also have knowledge in the field of digital video in general.

When working on the VENICE server system, you should be familiar with how to operate the hardware of a video/server system.

Furthermore, to use the DVS system in connection with other equipment, e.g. a VTR, you should know how to operate this equipment.

1.3 Conventions Used in this User Guide

The following typographical conventions will be used in this documentation:

- Texts preceded by this symbol describe activities that you must perform in the order indicated.
– Texts preceded by this symbol are parts of a list.

Texts preceded by this symbol are general notes intended to facilitate work and help avoid errors.

You must pay particular attention to text that follows this symbol to avoid errors.

“ ” Texts enclosed by quotation marks are references to other manuals, guides, chapters, or sections.

BUTTON	Text in small caps and bold indicates a push button
Menu	Text in italic and bold indicates either a menu name or options in a menu list
Menu » Option	In the specified menu select the stated item
Item	Text in bold only stands for other labeled items of a user interface
Directory/File	Directory structure or file
`Entry`	Parameters, selections or entries made in the program; it may also indicate a command (e.g. at a command line), a syntax or contents of a file/output

[Key]	An individual key or a key combination on a keyboard

Keyboard Shortcuts

To perform options or procedures with the keyboard often requires a simultaneous pressing of two keys.

Example:

[Ctrl + F1]	If this is given, hold down the [Ctrl] key and press simultaneously the [F1] key.

Screenshots

The screenshots shown in this documentation were taken for the most part from the Windows-based version of the VENICE client software. Depending on the operating system where the software is installed, their appearance may differ from your environment. However, they should contain the relevant elements that you need to understand the described actions.

1.4 Important Notes

To use the VENICE software correctly please heed the following:

On the DVS system only use the designated video drive (main storage) to store video and audio data. Other storage locations will be too slow for real-time operations.

Leave about 15% of the overall main storage capacity empty of data for real-time performance reasons.

The real-time capability of the DVS system depends to a large extent on the performance of the system's hardware. Therefore, it is recommended to terminate all other programs on the DVS system while working with VENICE.

Your DVS system has been tested thoroughly and is very reliable. However, because of the vast amount of third-party software available, its reactions on the installation of such could not be tested. The installation of third-party software on the DVS system may disrupt the real-time capability and/or limit the functionality of your system.

For any data management with the VENICE client software the latest Spycer application by DVS must be installed as well (see the "VENICE Administration and Configuration" user guide for further information).

If the VENICE client software is installed on a remote system, the Spycer application running there should be fully licensed. Otherwise the data streamed to the remote system will not be bandwidth optimized and audio will not be available.

On Linux operating systems the display suspend mode will be disabled when the VENICE client software is installed and it must remain disabled.

Basics

This chapter provides you with basic information about the VENICE client software. In addition to the information how to start the program, this chapter describes the steps to get started with the VENICE client software. This will be followed by several more basic information about the software, for example, about the slave mode, about how to free a video channel again for other users or how to shut down the program. Furthermore, this chapter provides some general notes useful when working with the software.

2.1 Starting the Program

This section provides you with a description how to start the VENICE client software. With one instance of the software you can control different video channels of one or more VENICE servers at the same time and even perform multi-device operations via channel groups. However, you can also run several instances of the software in parallel, for example, to have them side-by-side on the screen.

2.1.1 Starting the Software under Linux

To start the software under the Linux operating system perform the following:

- Select from the ***Applications*** menu of Linux the entry ***Sound & Video » Venice***.
  Alternatively, you may also start the program from a command line (terminal) by entering `Venice`.

This will load the VENICE client software by DVS and you can start working with it (see section "Getting Started" on page 2-3).

2.1.2 Starting the Software under Mac OS

To start the software under Mac OS perform the following:

- Select from the *`Applications`* folder of Mac OS the entry *`Venice.app`*.

This will load the VENICE client software by DVS and you can start working with it (see section "Getting Started" on page 2-3).

2.1.3 Starting the Software under Windows

To start the software under the Windows operating system perform the following:

- Select from the **START** button menu of Windows on the submenu ***DVS*** the entry for the DVS software (for example, ***All Programs » DVS » DVS Venice***).
  Alternatively, you may also start the program via the VENICE icon available on the desktop of Windows.

This will load the VENICE client software by DVS and you can start working with it (see section "Getting Started" on page 2-3).

2.2 Getting Started

This section describes how to get started with the VENICE client software, i.e. the steps that should be performed after starting the software (see section “Starting the Program” on page 2-2).

2.2.1 Connecting to a Video Channel

Right after starting the software (see section “Starting the Program” on page 2-2) the channel connection tab will be displayed. It lists the video channels of all VENICE servers that could be found in the network:

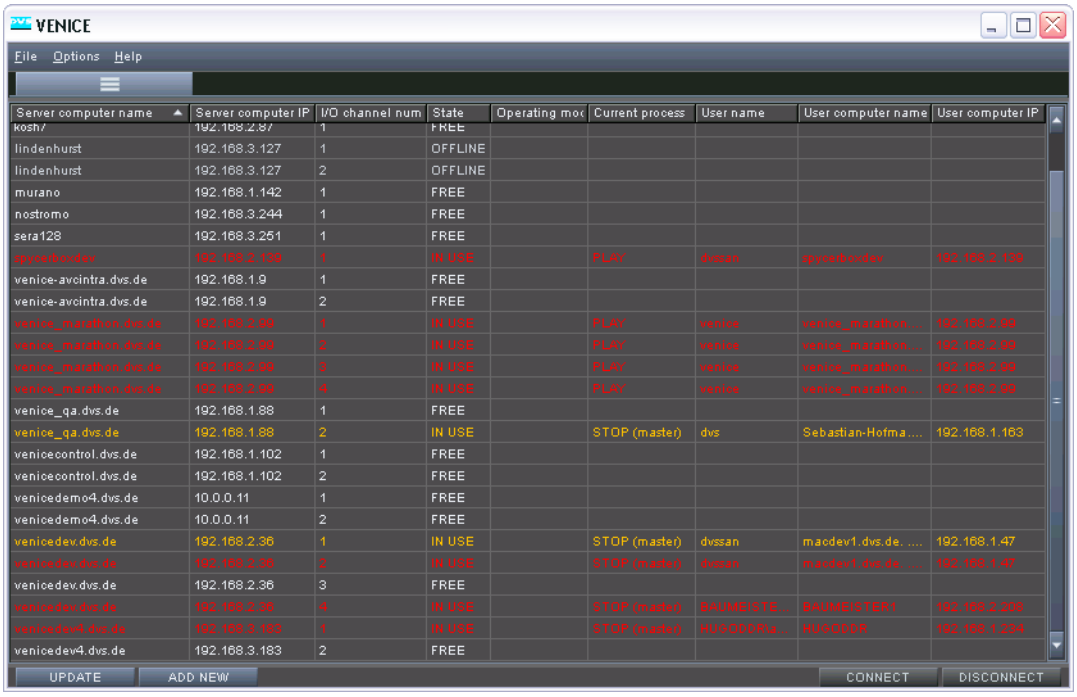


Figure 2-1: Selecting a VENICE video channel

Color	State	Explanation
gray	FREE	The video channel is free and can be used.
dark-gray	OFFLINE	The server is available in the network but the video channel (VENICE server software) cannot be reached.
red	IN USE	The video channel is occupied by another user and cannot be used.

Color	State	Explanation
orange	IN USE	The connection to the video channel has been terminated incorrectly. It may not be in use anymore and you can connect to it. However, if unsure about its state, contact the last user of the channel.
blue	IN USE	The video channel is occupied by me.

With the channel connection tab you have to connect to a VENICE server and allocate one or more video channels. Once a connection is successfully established and a project has been selected, you have full control over this channel and you can use it, for example, for play-out operations.

This step has to be performed with the VENICE client software locally installed on the VENICE server as well as with a remote installed one.

To connect to one of the video channels of the VENICE server perform the following:

- In the list identify the system you want to work on, e.g. via its computer name or its IP address.
- Then select a free channel from this system and press the button **CONNECT** or double-click the respective channel in the list.

With this the connection will be established: First the VENICE server is connected and then the video channel will be requested and allocated. If either of these connection steps fails, you will receive an appropriate error message.

Right after a successful connection to a video channel you will be asked to select a project for this channel. This is described in section "Selecting a Project" on page 2-5.

By performing the above mentioned steps repeatedly you can connect to as many video channels as you want.

To control other video channels at the same time you can also run several instances of the VENICE client software simultaneously.

Once a connection is successfully established, the respective channel (device) is 'IN USE'. To connect to this video channel, for example, from another VENICE client software, it must be freed first (see section "Disconnecting and Freeing a Video Channel" on page 2-14).

Further Features of the Channel Connection Tab

The channel connection tab provides the following features in addition:

– The columns of the channel list can be resized.
– The channel list can be sorted by clicking on a column heading.
– The channel list is built up when the software is started. With the button **UPDATE** (keyboard shortcut [F5]) you can update the channel list manually at any time.
– The channel list may not show all channels available in the network. With the button **ADD NEW** you can add a channel manually to the list by specifying either its IP address or the server's name and assigning a channel number to it:

Figure 2-2: Adding a video channel manually

– You can disconnect a channel that has been allocated by you by selecting the video channel from the channel list and pressing the button **DISCONNECT**.
– To work with the channel connection tab you can also use the context menu of the channel list.

2.2.2 Selecting a Project

After the successful connection to a video channel a window with the recently used projects will be displayed. The last ten project files will be listed:

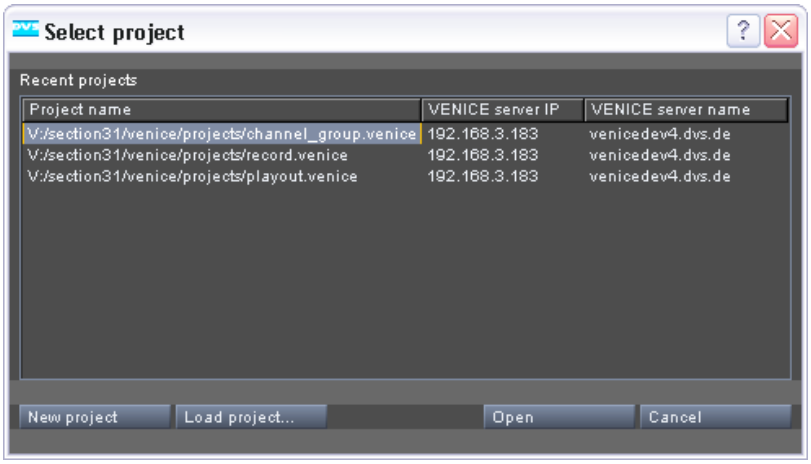


Figure 2-3: Selecting a project

- To open a project select one of the project files and press the button **OPEN** or double-click the project file in the list.
  Alternatively, you can also open one that is not shown in the list with the button **LOAD PROJECT...** or start a new project with the button **NEW PROJECT**.

Once a project has been opened or started anew, the connected video channel will be shown in another tab of the user interface and you can begin working with the video channel: You can either administer it beforehand (see section "Administering the Channels" on page 2-6) or choose one of its operation modes (see section "General Usage of a Channel Tab" on page 2-8).

For further information about project files see section "Projects" on page 2-16.

2.2.3 Administering the Channels

Once at least one channel is connected, it can be administered via the channel administration tab. It shows all video channels that you are currently connected to:

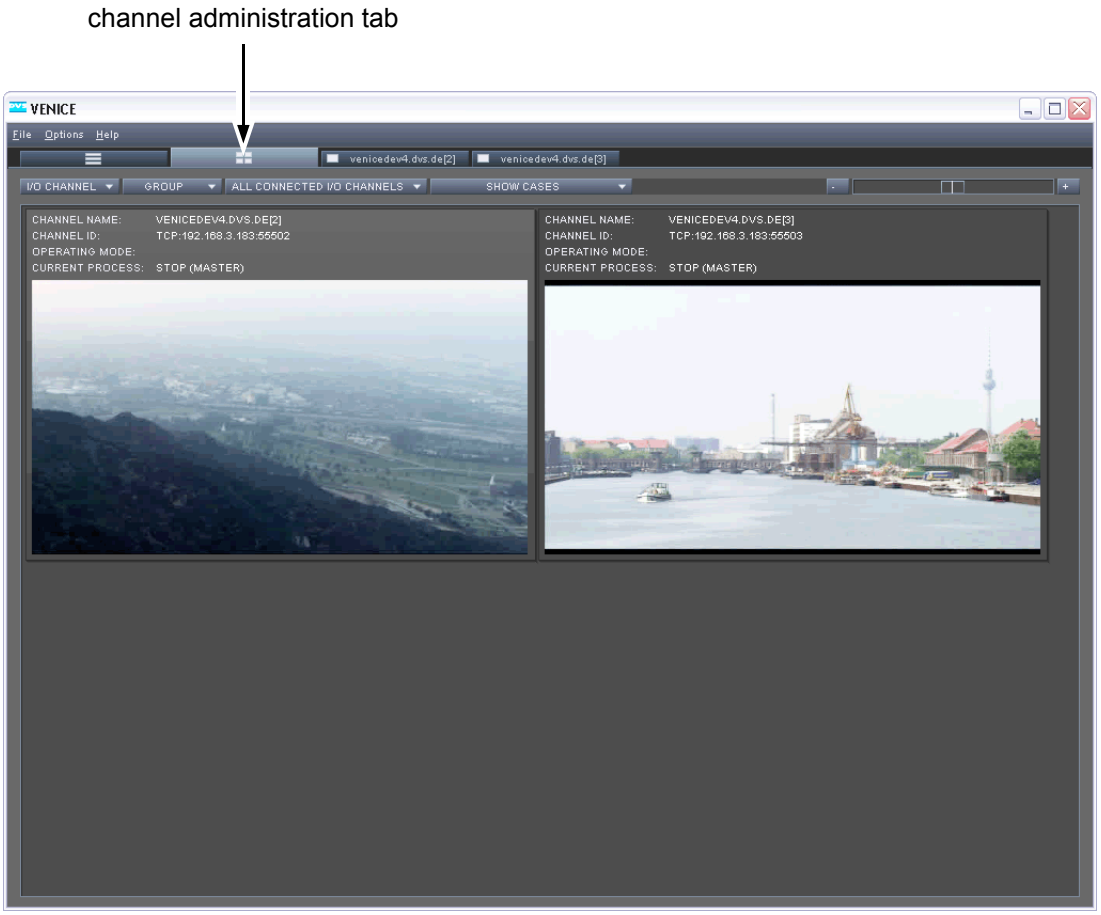


Figure 2-4: Administering VENICE video channels

On the channel administration tab you can, for example, assign a name to each channel or disconnect one:

- Select the channel that you want to administer via one of its show cases.
- Then choose from the **I/O CHANNEL** combo box the respective menu option that you want to perform (e.g. ***Rename...***).

Afterwards you can begin working with the video channel, for example, by switching to its tab and choosing one of its operation modes (see section "General Usage of a Channel Tab" on page 2-8).

On this tab you can also form channel groups to control two or more VENICE channels simultaneously from a single tab. Further information about this and the channel administration tab can be found in chapter "Administrating Channels" on page 3-1.

2.3 General Usage of a Channel Tab

Once the tab of a connected video channel has been selected, the controls for this channel are displayed. The following figure indicates how to use the main part (left half) of the tab of a video channel in general:

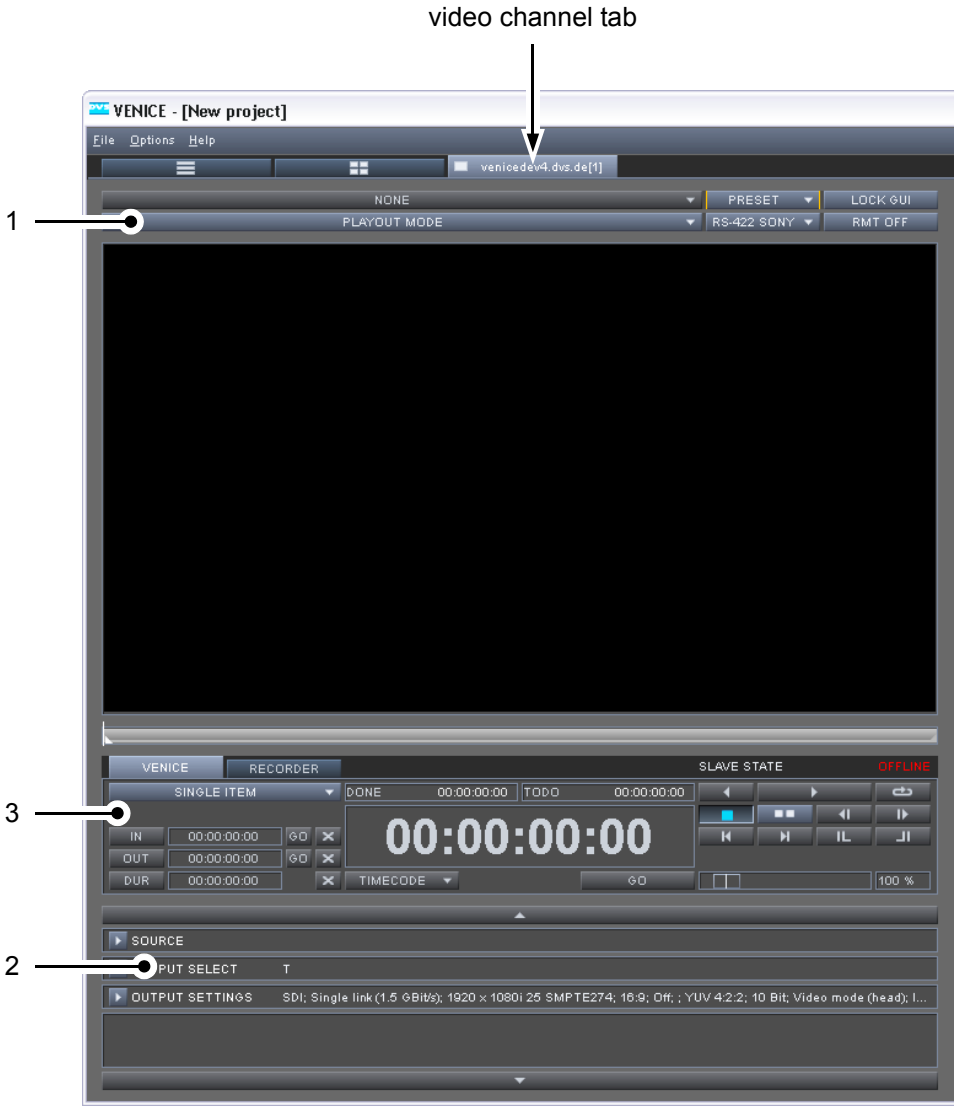


Figure 2-5: The general usage of a video channel tab

1. Selecting an operation mode.
2. Configuring the operation mode.
3. Performing the operation.

All steps are explained in more detail in the following.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the steps described in the following (see section “Preconfiguring the VENICE Client Software” on page 2-15).

2.3.1 Selecting an Operation Mode

After selecting the tab of a video channel you can select between the different operation modes for this channel:

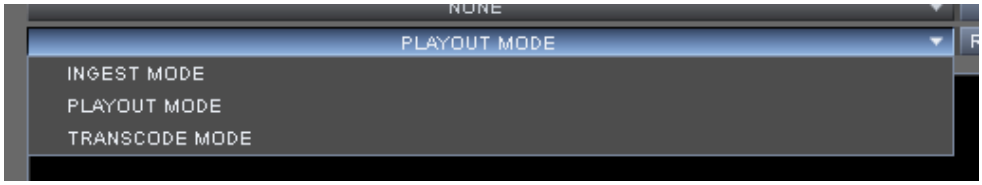


Figure 2-6: Selecting the operation mode

- Select the desired operation mode from the drop-down list of the operation mode combo box. You can choose between an **INGEST MODE**, a **PLAYOUT MODE** and a **TRANSCODE MODE**.

In the **TRANSCODE MODE** you can convert video and audio material to different file formats. If possible, the file conversion will be performed in hardware at a faster render speed.

When **PLAYOUT MODE** or **INGEST MODE** has been selected, the VENICE server assumes the role of either the player or the recorder. The opposing role can be performed by a connected external device:

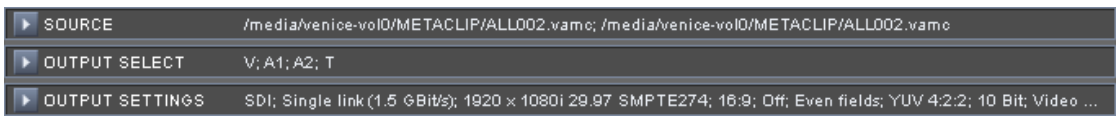
Operation Mode	Role of VENICE	Role of External Device
playout mode	player	recorder
ingest mode	recorder	player

After the operation mode has been selected, it has to be configured properly for the desired task.

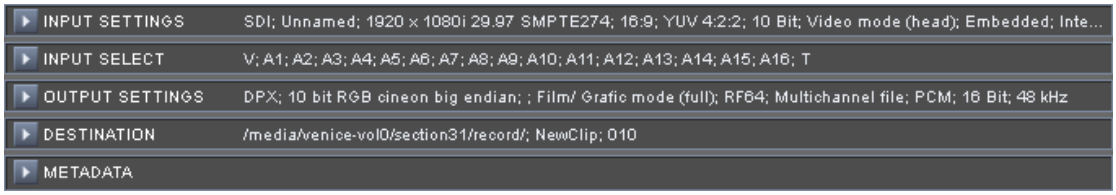
2.3.2 Configuring the Operation Mode

Prior to performing an operation with VENICE you have to configure the selected operation mode. The configurations for the operation modes can be found at the bottom of the user interface:

playout mode configurations (collapsed):


SOURCE
/media/venice-vol0/METACLIP/ALL002.vamc; /media/venice-vol0/METACLIP/ALL002.vamc
OUTPUT SELECT
V; A1; A2; T
OUTPUT SETTINGS
SDI; Single link (1.5 GBit/s); 1920 x 1080i 29.97 SMPTE274; 16:9; Off; Even fields; YUV 4:2:2; 10 Bit; Video ...

ingest mode configurations (collapsed):


INPUT SETTINGS
SDI; Unnamed; 1920 x 1080i 29.97 SMPTE274; 16:9; YUV 4:2:2; 10 Bit; Video mode (head); Embedded; Inte...
INPUT SELECT
V; A1; A2; A3; A4; A5; A6; A7; A8; A9; A10; A11; A12; A13; A14; A15; A16; T
OUTPUT SETTINGS
DPX; 10 bit RGB cineon big endian; ; Film/ Grafic mode (full); RF64; Multichannel file; PCM; 16 Bit; 48 kHz
DESTINATION
/media/venice-vol0/section31/record/; NewClip; 010
METADATA

transcode mode configurations (collapsed):

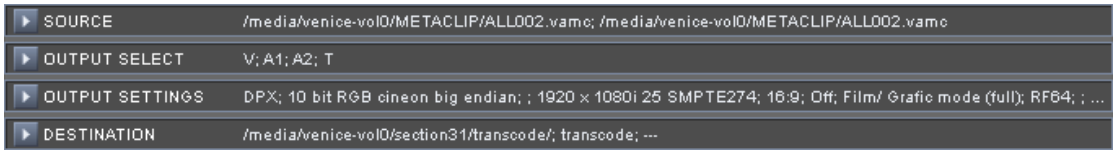

SOURCE
/media/venice-vol0/METACLIP/ALL002.vamc; /media/venice-vol0/METACLIP/ALL002.vamc
OUTPUT SELECT
V; A1; A2; T
OUTPUT SETTINGS
DPX; 10 bit RGB cineon big endian; ; 1920 x 1080i 25 SMPTE274; 16:9; Off; Film/ Grafic mode (full); RF64; ; ...
DESTINATION
/media/venice-vol0/section31/transcode/; transcode; ---

Figure 2-7: Operation mode configurations

When the configurations are collapsed they show you, as space permits, their settings in a single line in text form (e.g. for the output settings in the playout mode: `SDI; Single link (1.5 GBit/s); 1920 x 1080i 29.97 SMPTE274; 16:9; Off; Even fields; YUV 4:2:2; 10 Bit; Video ...`). With a click on the buttons showing a triangle to the left the respective settings items can be expanded or collapsed.

Via the context menu invoked on a triangle button all settings can be expanded or collapsed in a single step (depending on the state of the triangle button). See also section “The 'Options' Menu” on page 8-3.

Figure 2-8: Context menu to show/hide all settings

When there is not enough space available to display the configuration settings when expanded, you can use the buttons at the top and bottom of this area to scroll through the configurations:

Figure 2-9: Scroll buttons at top and bottom

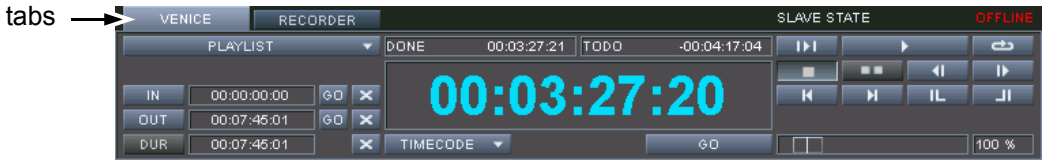
- Use the configurations to configure the selected operation mode. Further information about this can be found in section “Configuring a Play-out” on page 4-2, section “Configuring a Record” on page 5-3 or section “Configuration Items” on page 6-2.

Once the selected operation mode is configured properly, you can start using the video channel of the VENICE server.

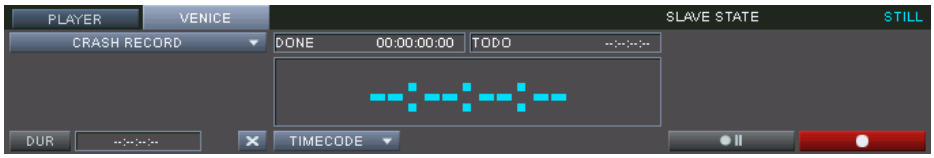
2.3.3 Performing the Operation

With the player/recorder controls you can start the desired operation. In the playout or ingest mode the video channel of the VENICE server and an externally connected device can be controlled, each according to its role determined by the chosen operation mode (see section “Configuring the Operation Mode” on page 2-9). The device that should be controlled can be selected with the tabs above the controls:

playout mode:



ingest mode:



transcode mode:

Figure 2-10: The player/recorder controls

- Set up the operation by, for example, determining in- and outpoints for the operation.
- Then start the desired operation. Further information about all this can be found in chapter “Playing Out Clips” on page 4-1, chapter “Recording Clips” on page 5-1 or chapter “Transcoding Clips” on page 6-1.

Once the operation is complete and your task is finished, you can stop your work with the VENICE server at any time. For this you have to disconnect and free the video channel so that others can use it for their work. This is described in section “Disconnecting and Freeing a Video Channel” on page 2-14.

2.4 Slave Mode

A video channel usually operates as a master. Nevertheless, in the play-out and ingest mode (see section “Selecting an Operation Mode” on page 2-9) it can be used as a slave as well. Then the video channel can be controlled by an external device.

With the combo box to the left of the remote button (**RMT...**) you can select the protocol that should be used to control the video channel in slave mode. You can select between the Sony 9-pin protocol (RS-422), VDCP (RS-422) or MOS (Ethernet). The slave mode can be activated by pressing the **RMT OFF** button:

Figure 2-11: Slave mode settings

Afterwards the remote button changes its appearance to its active state and will be labelled **RMT ON**. Then, commands for record, play, stop, jog, or shuttle (MOS: receiving a playlist and updates of the playlist) can be sent to the VENICE server and will be carried out by the video channel depending on the selected operation mode. If one of the RS-422 protocols has been selected, the controlled video channel will behave like a VTR using preroll, postroll, etc. The specifications of these parameters can be found in the “VENICE Administration and Configuration” user guide.

Normally, when in slave mode, the video channel will be controlled by the master. However, with the slave mode activated several controls for the video channel will still be available in the user interface. They can be used for a direct control of the video channel without deactivating the slave mode.

With MOS selected VENICE can receive a playlist as well as updates of the playlist. To play it out you have to use the VENICE client software with the slave mode activated. The MOS levels currently implemented are 0 and 2.

To deactivate the slave mode press the button **RMT ON** again. Afterwards the remote button changes its appearance to its deactivated state and it will be labelled **RMT OFF**.

2.5 Locking the User Interface

To make sure that the currently running task does not accidentally get interrupted you can lock the user interface of the software. For this activate the button **LOCK GUI** to the right of the preset settings:

Figure 2-12: Locking the user interface

Then the items of the user interface will be dimmed and unavailable, and the connected video channel will continue with the task that was initiated previously.

As a safety precaution, with the user interface locked you cannot unlock it again with one of its items. To unlock it you have to press the key combination [Ctrl + L] on the keyboard.

2.6 Disconnecting and Freeing a Video Channel

When your work with the VENICE client software is finished, the allocated video channel should be freed again so that other users can use it for their tasks. If a video channel is not freed again, it will remain occupied by this instance of the VENICE client software, and no one else can connect to it.

To free a video channel perform one of the following:

- Close the VENICE client software (see section "Exiting the Program" on page 2-17) or
- use the menu option ***Disconnect*** on the ***File*** menu (see section "The 'File' Menu" on page 8-2) or
- use the menu option ***Disconnect*** on the context menu of a video channel tab or
- use the menu option ***Disconnect*** of the **I/O CHANNEL** combo box on the channel administration tab (see section "Administering Single Channels" on page 3-3) or
- use the button **DISCONNECT** on the channel connection tab to disconnect the video channel (see section "Connecting to a Video Channel" on page 2-3).

Then the connection to the respective video channel of the VENICE server will be severed and the channel will be free for others to use.

A freeing/disconnection of video channels can be forced at the VENICE server. Further information about this can be found in the "VENICE Administration and Configuration" user guide.

2.7 Preconfiguring the VENICE Client Software

The VENICE client software can be preconfigured for often recurring tasks so that operators are not required to do this time and again during their work. It is up to the management/administrator to decide how detailed this preconfiguration should be. They have to prepare the files and the operator has to act accordingly.

The VENICE client software offers various files that can be used for a preconfiguration and they are described in this section. All files can be saved and loaded whenever required.

2.7.1 Presets

Via presets you can easily set up a video channel tab for often recurring tasks, such as records from a particular device in a certain file/video format or play-outs of prepared VENICE playlists in a particular format. Presets store the layout of the software (e.g. operation mode and state of the user interface) as well as the configuration settings, i.e. they store everything of a video channel tab but content (such as clip names, paths, or other presets).

File extension: `*.vprst` Preset file

These files are normally stored locally where the VENICE client software is running, but can be transferred easily between systems by copying/moving their files and can then be used immediately.

Presets can be created and administered with the items at the top of the user interface:

Figure 2-13: The items to handle presets

With the combo box to the left you can select already created/loaded presets.

With the combo box **PRESET** to the right presets can be administered. It provides the following possibilities:

Save...	Saves the currently set layout and configurations as a preset to a file.
Load...	Loads a stored preset from a file. Afterwards it can be selected from the drop-down list of the combo box to the left.
Delete	Deletes/removes the currently selected preset from the combo box to the left and its drop-down list. However, the corresponding preset file is not deleted.

Delete all	Deletes/removes all presets from the combo box to the left and its drop-down list. The corresponding preset files are not deleted.

2.7.2 Projects

VENICE project files can be used to make a complete snapshot of the current state of a video channel tab. In other words they store everything that is saved via presets (see section "Presets" on page 2-15) and, furthermore, store content as well.

File extension: `*.venice` Project file

These files are normally stored locally where the VENICE client software is running, but can be transferred easily between systems by copying/moving their files and can then be used immediately.

Projects are administered via the ***File*** menu of the menu bar. For further information about it see the section "The 'File' Menu" on page 8-2.

When connecting to a video channel, a window will be displayed showing you the recently used projects. Then you can select one for loading or start a new one (see section "Selecting a Project" on page 2-5).

2.7.3 Defaults

For new projects you can store settings (defaults). They can be saved and loaded via the ***Options*** menu (see section "The 'Options' Menu" on page 8-3). The defaults store the same settings as presets (see section "Presets" on page 2-15) and they will be used each time a new project is initialized (see, for example, section "Selecting a Project" on page 2-5). However, already opened projects can be reset to the defaults as well (see section "The 'Options' Menu" on page 8-3).

2.7.4 Playlists, Batch Lists and Transcoding Lists

With the VENICE client software you can create lists that can be used for a play-out, batch record or a transcoding. They can be created and administered either with the playlist, batch record list or transcoding list editor (see section "The List Editors" on page 7-3). There you can add any number of video and audio clips in any sequence you like. On playlists and transcoding lists it is also possible to link video to audio clips so that they are used together, and to have VENICE metaclips (see section "Metaclips" on page 2-17) as clips/items on the list.

File extension: `*.vplst` Playlist, batch or transcoding list file

These files are normally stored locally where the VENICE client software is running, but can be transferred easily between systems by copying/moving their files and can then be used immediately. For further details about how to use lists in the VENICE client software see section "The List Editors" on page 7-3.

2.7.5 Metaclips

VENICE metaclips are used as a container for video and audio clips. They are normal text files that detail among others the location of the included clips.

During a record with VENICE, metaclips are created automatically and stored on the main storage same as the actual data (see section "The Captured Files" on page 5-10). They can also be created via a list editor of the VENICE client software (see section "The List Editors" on page 7-3) or via Spycer. For play-out and transcoding tasks you can use VENICE metaclips as source data just as any other clip (either as single items or on play- and transcoding lists).

Normally one video and one or more audio clips are described in a metaclip. However, it is also possible to reference to several video/audio clips in a metaclip and they would be played out successively as listed in the metaclip.

File extension:	`*.vamc`	Video/audio metaclip file

2.8 Exiting the Program

To end a running instance of the VENICE client software perform the following:

- Select the option ***Exit*** on the ***File*** menu (*Mac:* ***VENICE » Quit VENICE***) or press the key combination [Alt + F4] or [Ctrl + Q] (*Mac:* [⌘ + Q]) alternatively.

This will close the instance of the VENICE client software. In case a connection to one or more video channels is currently established, the connection(s) will be severed (see also section "Disconnecting and Freeing a Video Channel" on page 2-14).

2.9 About Timecode / Frame Number Fields

The DVS software provides various fields where data in timecode format is provided or an entry in such a format is necessary. The timecode format is `hh:mm:ss:ff` (hours, minutes, seconds, and frame number).

If `--:--:--:--` or `---` is displayed in an entry field, a value has not been specified so far. To delete a once made entry you can use the delete controls as described in section "The Controls Explained" on page 4-15.

Drop-frame Timecode Indication

The last colon of the timecode format may be displayed in the software as a full stop. Then the timecode fields of the software will display, for example, `12:25.07` instead of `12:25:07`. This indicates that the drop-frame timecode feature is activated. When entering timecode, the last colon can also be replaced by a full stop.

Higher Frequencies and Timecode Format

In the user interface of the DVS software an asterisk may be added to the timecodes (e.g. `12:25:07*`). This will be the case when the video raster's frequency exceeds 30 frames per second because the original timecode format is limited to frame rates as high as that. To account for video rasters with higher frequencies (e.g. 60 Hz) one timecode number is used for several video frames, meaning every second, third or fourth timecode provides the same timecode number (the frames notation (see below) is not affected). These repeated timecodes are shown in the user interface with an added asterisk and at the outputs they are particularly flagged as well. The standard timecodes that will be used for such procedures are 24 Hz, 25 Hz and 30 Hz: For example, a video raster frequency of 48 Hz is provided with a 24 Hz timecode, while a 60 Hz frequency receives a 30 Hz timecode. This will result in a doubling of the timecode numbers:

60 Hz @ 30 Hz TC	60 Hz
...00:00	...00:00
...00:00*	...00:01
...00:01	...00:02
...00:01*	...00:03
...	
...00:29	...00:58
...00:29*	...00:59

60 Hz @ 30 Hz TC	60 Hz
...01:00	...01:00
...01:00*	...01:01

At even higher frame rates (e.g. 90 Hz) the timecode numbers will be tripled, quadrupled etc., making a timecode handling of all common frequencies possible.

Entering Timecode

When entering timecode in one of the software's position or length indicators, it is not necessary to type in the timecode separators (colons). Simply place the cursor at the appropriate position (e.g. at the minute numbers) and enter the timecode numbers from there. After pressing [Enter] on your keyboard or selecting another item of the user interface the entered timecode is accepted in the respective timecode field.

When you enter a timecode value that exceeds the raster's frequency, the timecode will be recalculated (e.g. `00:00:02:47` will be set to `00:00:03:23` if raster is in 24 Hz). When entering a timecode value that exceeds the boundaries of the available timeline, it may be set to the lowest/highest possible value or not accepted at all.

Switching the Notation

Position and length indicators can be switched from a display of the timecode notation to frame numbers and vice versa. For this you can use the context menu of a timecode/frame number field (e.g. the one of the position field in the middle of the player/recorder controls).

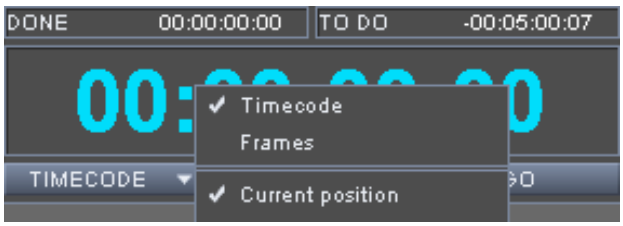


Figure 2-14: Context menu of the position field

Select from the context menu the respective option. This will change the position and length indicators to the selected notation. It can be individually set for the player and recorder controls. Alternatively, you can use the **TIMECODE** / **FRAMES** combo box to switch the notation. For further information about it as well as the other controls see section "The Controls Explained" on page 4-15.

2.10 About Audio

The DVS software provides a full support of audio during record or play-out operations. Up to 16 different channels of audio can be in- or output by the system. The audio data can be accessed and processed in the software as easily as the video material.

When performing a record operation, the audio data can be input either embedded in the video signal (audio in video, AIV) or via the separate digital audio connectors. You may have both signals connected to the DVS system and prior to a record you have to specify the type of signal that the system has to capture (see section "Configuring the Input Settings" on page 5-3). However, for an input of audio data a sampling rate of 48 kHz is supported only. In case you want to capture audio alone, a video signal has to be present at the system's input and the video format settings have to be set accordingly. Regarding the created files, when no container format has been selected, you can choose between several file formats for audio (e.g. *.aif or *.wav). Additionally you can specify whether multiple channel files (one file per record containing multiple channels of audio) or mono files (if applicable, several files containing each a mono channel) should be written.

On the other hand, when performing a play-out operation, you do not have to configure the way a play-out of audio is performed. It will be played out simultaneously, embedded in the video signal (AIV) as well as via the digital audio output connectors.

The operation mode configurations provide in each operation mode 16 audio peakmeters – one for each audio channel – to monitor audio during record or play-out operations:

Figure 2-15: Audio peakmeter for 16 audio channels

The peakmeters show the audio that is streamed via network. They can serve as a point of reference and should not be used for precision measuring.

The peakmeter for the playout/transcode mode can be found among the **OUTPUT SELECT** items (see section "Selecting Essences for Play-out" on page 4-6 and section "Configuration Items" on page 6-2) and for the ingest mode under the **INPUT SELECT** settings (see section "Selecting Essences for Record" on page 5-5).

Additionally, there is the audio monitoring tool available which allows you to adapt the streamed audio that can be heard at your workstation (see section “Audio Monitoring” on page 7-11).

2.11 About Source Timecode

Some file formats for clips, e.g. *.dpx files, are capable of storing more information than just their image content. These information are usually written in a specified format into the file headers which can be read and interpreted by different software applications that support these kind of information. Among the information stored you can find, for example, the name of the creator (usually the program that created the files), the creation time and date, and the timecode.

Most of the data stored in file headers and transmitted to the VENICE server during a capturing will only be recorded and given back again during a play-out, if appropriate. However, DVS especially makes use of the timecode information.

The DVS software supports additional information such as source timecode in the *.dpx, *.mov as well as *.mxf and Broadcast Wave file formats. However, some features (e.g. multiple timecodes or the editing of header data) are available for *.dpx files only.

With the help of Spycer the header data, such as timecode or keycode information, can be adjusted to your liking (see “Spycer” user guide for more information).

Timecode information stored in file headers (the so-called source timecode) can be used in the VENICE client software. For example, you can use clips that provide source timecodes during the play-out of a playlist and regardless of the current position they will always show their source timecode. Then, prior to a play-out you can decide whether the internal timecode should be given out as a timecode signal or the source timecodes provided by the files.

Normally, image files capable of storing timecode information provide space for one timecode only in their header (generic source timecode). DVS systems, however, are able to receive (e.g. during a record) several timecodes incorporated in signals at various connectors. During a write procedure, i.e. when recording clips (*.dpx files), they will write the received timecode information into the file headers. The ones additionally received will be stored at a location for user defined data in the header and usually cannot be interpreted by applications other than the ones developed by DVS. When processing such clips afterwards, for instance, with another DVS system, you may select between the various

timecodes provided by the clips which may give you more control over their position in a timeline.

Audio files equipped with source timecode usually provide a start timecode only. Subsequent timecodes will be calculated and drop-frame timecodes are currently not supported.

2.12 Avid Workflow

The Avid workflow for VENICE is optionally available. With it you can work directly on Avid's ISIS or use the production asset management Interplay. After a correct installation and setup by DVS, ISIS and Interplay will be available as external volumes in VENICE:

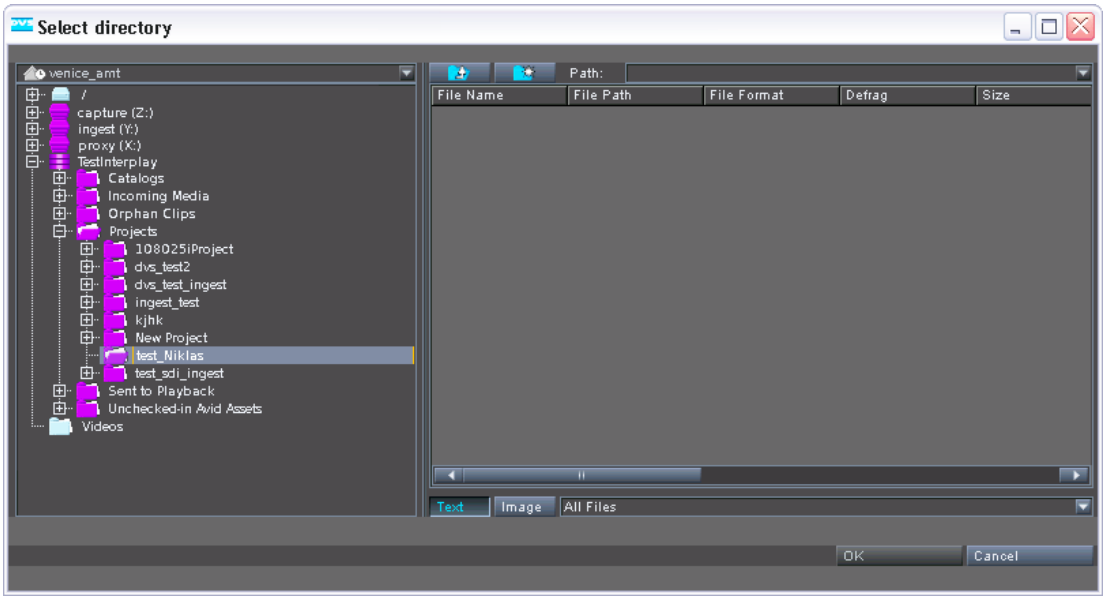


Figure 2-16: ISIS and Interplay in VENICE

Then you can select as the record destination either a workspace located on the ISIS storage or an Interplay project. When setting the file format to `MXF (for ISIS & Interplay)` and selecting a proper codec, an ingest via HD-SDI will be performed in Avid compatible formats and the audio/video essences will be written to the corresponding workspace or project on the ISIS storage. Recorded material can be worked upon directly, even while it is still being recorded.

Furthermore, prior to the record metadata can be specified in the configuration settings (see section "Configuring a Record" on page 5-3):

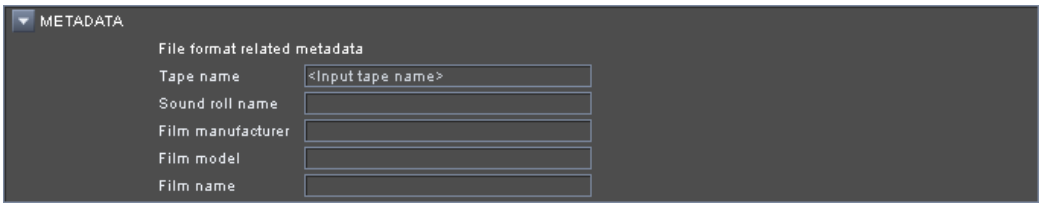


Figure 2-17: The metadata settings

When ingesting on ISIS directly, an AAF as well as an XML file will be created containing among others the metadata information. When performing the record for an Interplay project, the metadata will be transferred to Interplay and written in its database.

Administrating Channels

On the channel administration tab you can administer the video channels. It shows all video channels that you are currently connected to in 'show cases':

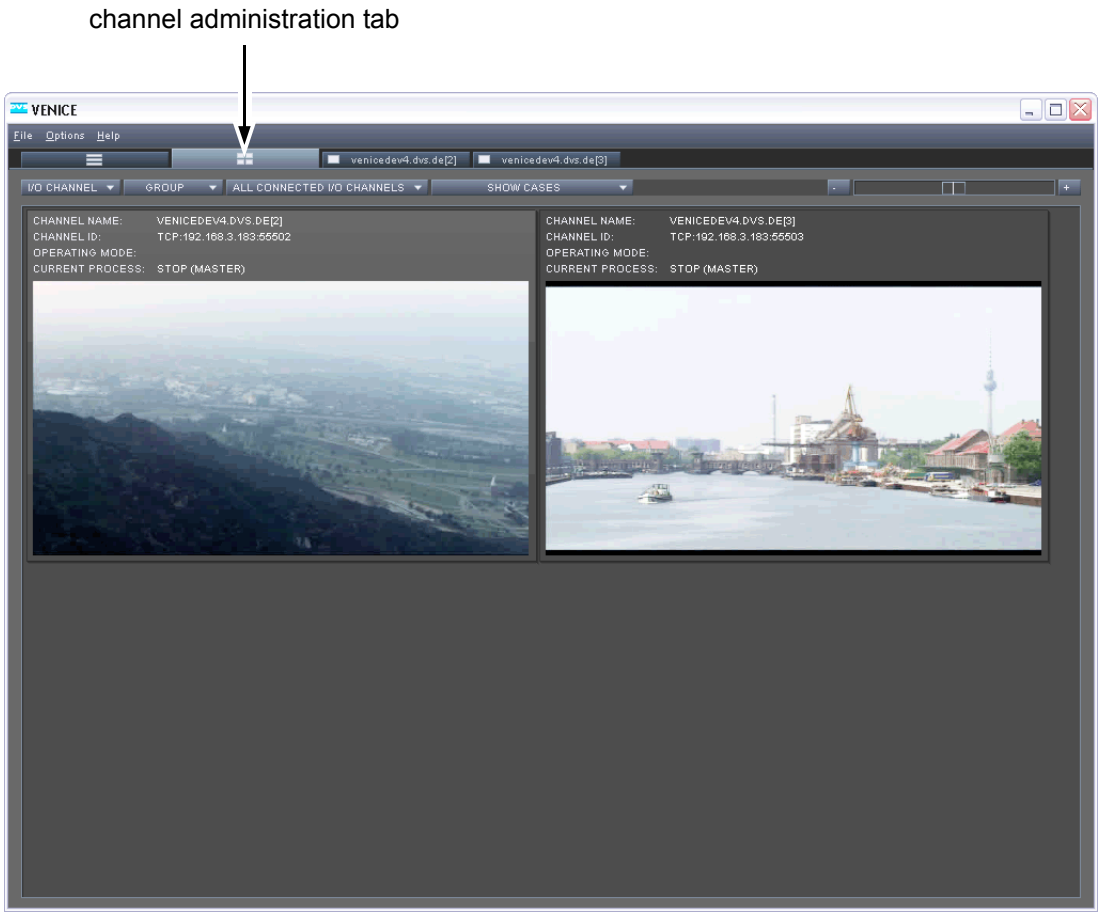


Figure 3-1: Administering VENICE video channels

On this tab you can, for example, assign a name to each channel or disconnect them. Additionally, you can form channel groups to control two or more VENICE channels simultaneously from a single tab.

This chapter describes the features of the channel administration tab.

3.1 Show Cases

The channels are shown in so called 'show cases':

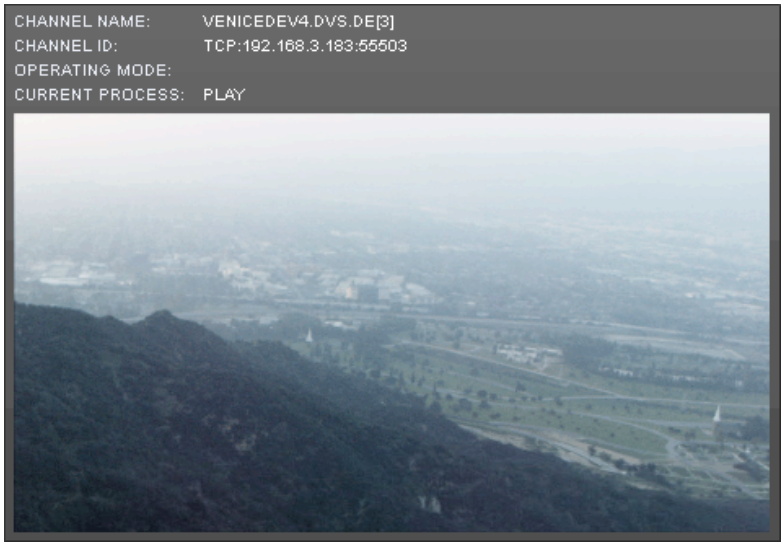


Figure 3-2: Show case of a video channel

Each show case provides you with information about the video channel, such as its current name, its address in the network or the process that is currently running.

Via the slider at the top right of the channel administration tab you can configure the size of the displayed show cases:

Figure 3-3: Adjusting the size

Use either the slider or the buttons to its left and right to change the size of the show cases to your requirements. A double-click on the slider will set the show cases back to their default size.

3.2 Administering Single Channels

On the channel administration tab you can administer single video channels, for example, by assigning a name to each channel or by disconnecting channels.

For this the channel administration tab provides the **I/O CHANNEL** combo box:

Figure 3-4: Menu of the combo box

As soon as a video channel/show case is selected, the menu options will be available:

Rename...	Allows you to assign another name to the selected video channel. Afterwards the name in the show case as well as on its tab will be changed.
Show in the corresponding tab	Selects the tab of the respective video channel and displays it.
Disconnect	Disconnects and frees the video channel (see section “Disconnecting and Freeing a Video Channel” on page 2-14).

3.3 Channel Groups

On the channel administration tab you can form channel groups to control two or more VENICE channels simultaneously from a single tab (also called multi-device operation mode). This section explains how to form a channel group, how to administer it, as well as how to use it for play-out or record operations.

3.3.1 Forming a Channel Group

To form a channel group you must be connected to two channels at least and they should be shown on the channel administration tab:

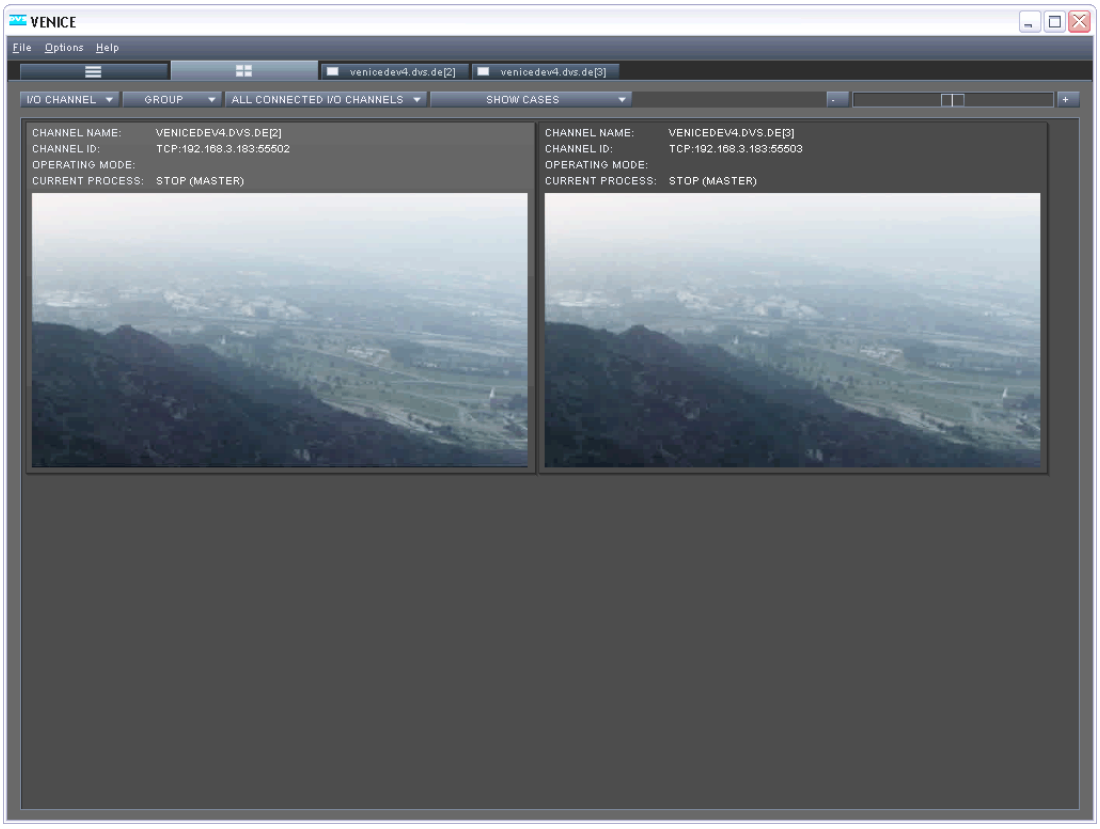


Figure 3-5: Starting a channel group

Then perform the following:

Before forming a channel group the channels should be configured properly for their tasks (see section "General Usage of a Channel Tab" on page 2-8).

- From the combo box **GROUP** select the menu option ***Create new...***.

This will display the following window on the screen:

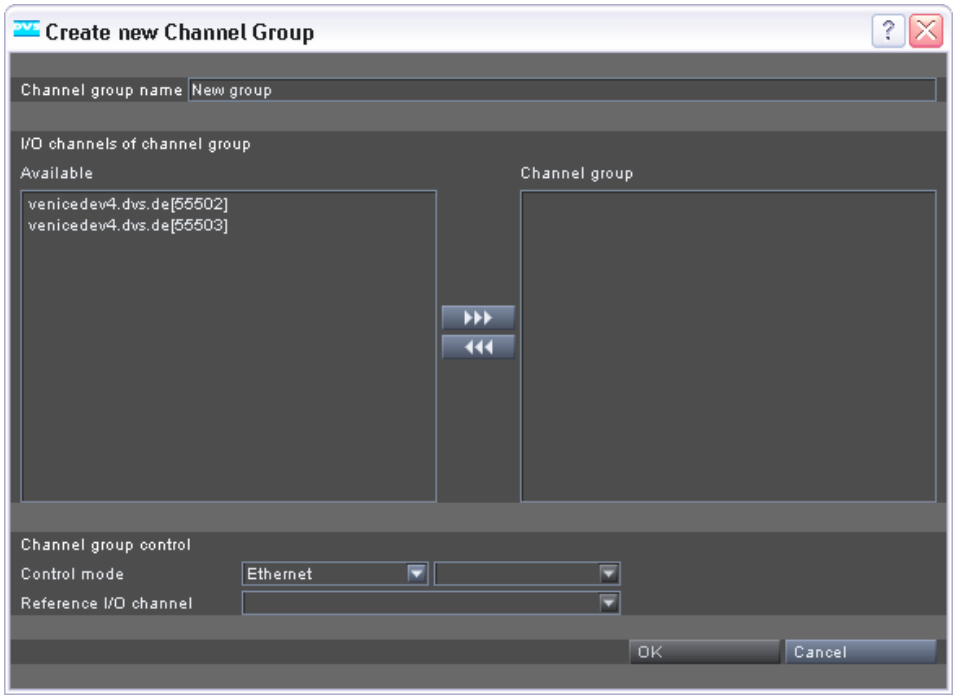


Figure 3-6: Creating a channel group

- Enter a name for the channel group in the entry field **Channel group name** at the top of the window.
- Select from the list field **Available** the channels that should be added to the group.
- Transfer them to the list field **Channel group** on the right with the button ▶▶▶.
- In the area **Channel group control** specify the way the channel group should be controlled:

Control mode…	Determines the remote connection between the channels (`Ethernet` or `RS-422`). If `Ethernet` is selected, you have to specify the IP address that should be used to interconnect all channels, i.e. the IP address of the system where the reference channel is located. The localhost address `127.0.0.1` can be used when the channels of the group are located all on one VENICE server.
Reference I/O channel	Determines the reference channel which will be used to send the commands to the other channels. Its timeline and configurations are shown on the channel group tab.

- Once everything is specified, press the **OK** button.

This will form the channel group and you will receive on the channel administration tab a new show case representing the channel group:

Figure 3-7: Show case of a video channel group

Additionally, together with the show case a new tab will be displayed in the user interface that can be used to control the channel group (see section “Using the Channel Group” on page 3-7).

The video channels that have been added to the group are now in slave mode. The new formed channel group acts as the master that controls the slaves for simultaneous play-out or record operations.

3.3.2 Administering a Channel Group

Once a channel group is available on the channel administration tab, it can be administered in almost the same way as a single channel. For this the channel administration tab provides the **GROUP** combo box:

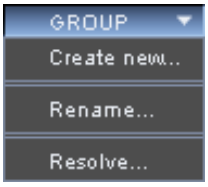


Figure 3-8: Menu of the combo box

As soon as the show case of a channel group is selected, the menu options will be available:

Create new...	Creates a new channel group. See section “Forming a Channel Group” on page 3-4.

Rename...	Allows you to assign another name to the selected group. Afterwards the name in the show case as well as on its tab will be changed.
Resolve	Dissolves the group: The tab of the group as well as the show case of the group on the channel administration tab will be closed. Afterwards you can use the channels separately again.

3.3.3 Using the Channel Group

When a channel group is formed, a further tab will be shown in the VENICE client software:

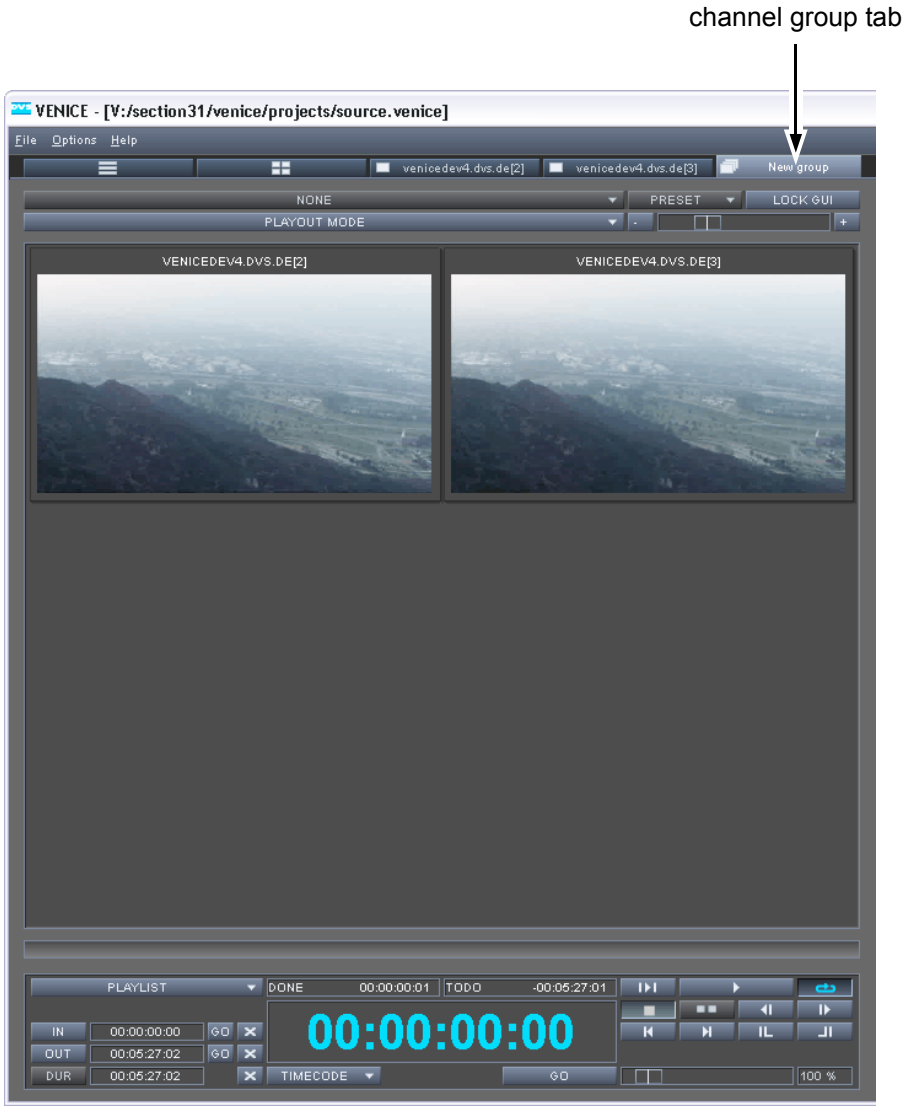


Figure 3-9: Tab to control a channel group

This tab can be used to control the channel group: The video channels of the group are in the slave mode which are controlled by the channel group.

The tab of the channel group shows you similar to the channel administration tab the members of the group in show cases. Via the slider at the top right of the show cases the size of the displayed show cases can be configured (see also section “Show Cases” on page 3-2).

The timeline (e.g. playlist) and configurations shown in the channel group are the ones of the reference channel.

By switching the operation mode (see section “Selecting an Operation Mode” on page 2-9) on the channel group tab you switch the operation mode of all channels in the group.

Then you can use the provided controls to perform play-out or record operations same way as described in section “Performing the Operation” on page 2-11:

playout mode:

ingest mode:

Figure 3-10: Player/recorder controls of the channel group

In the playout mode each channel will play out the material that is currently loaded in the individual channel and the channels will follow the positions of the reference channel.

In the ingest mode each channel will record to the destination that has been configured for the individual channel.

For further information about the controls see chapter “Playing Out Clips” on page 4-1 or chapter “Recording Clips” on page 5-1.

Further information about the setup and configuration of channel groups can be found in the “VENICE Administration and Configuration” user guide.

3.3.4 Dissolving a Channel Group

When the group is no longer needed, the channels of the group have to be separated again by dissolving the group. To dissolve a group perform one of the following:

- Close the VENICE client software (see section “Exiting the Program” on page 2-17) or
- use the menu option ***Resolve*** on the ***File*** menu (see section “The 'File' Menu” on page 8-2) or
- use the menu option ***Resolve*** on the context menu of a channel group tab or
- use the menu option ***Resolve*** of the **GROUP** combo box on the channel administration tab (see section “Administering a Channel Group” on page 3-6).

Then the group is separated again and the channel group tab will disappear. The channels of the group can afterwards be used individually again.

In addition you can dissolve a group by disconnecting one of its channels (see section “Disconnecting and Freeing a Video Channel” on page 2-14).

Playing Out Clips

When a connection to a video channel of the VENICE server is established (see section “Getting Started” on page 2-3), you can use this channel to play out video and/or audio. For this the VENICE client software must be in the **PLAYOUT MODE** (see section “Selecting an Operation Mode” on page 2-9).

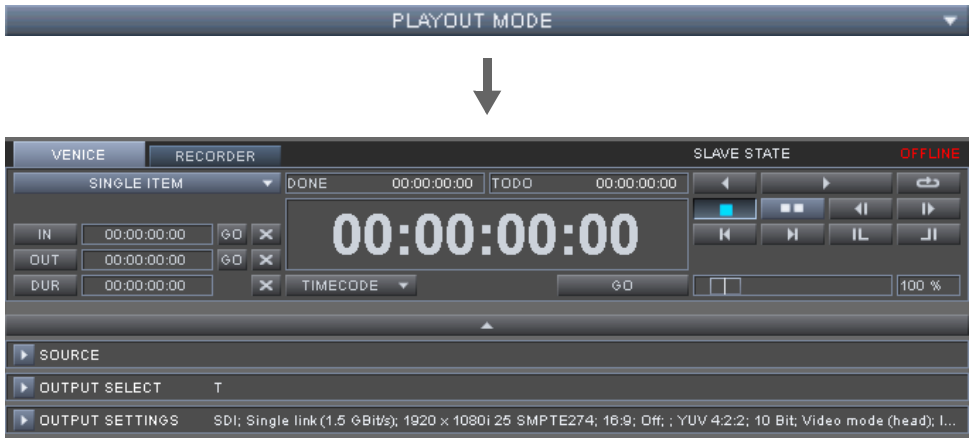


Figure 4-1: Controls and configurations of the playout mode

In the playout mode you have the following possibilities at hand:

- You can configure all output related settings.
- You can control the VENICE server for a play-out of clips.
- You can control an externally connected device, for example, to verify a position and set in- and/or outpoint.
- You can control an externally connected device for a simultaneous record operation (manual crash or autoedit record).
- You can set the VENICE server in slave mode for a remote controlled play-out from an externally connected device.

This chapter describes how to use the software to play out clips with the VENICE server.

4.1 Configuring a Play-out

Prior to playing out clips with the VENICE server you have to set up the play-out and configure output related settings (see also section "Configuring the Operation Mode" on page 2-9). As a minimum you have to select content for a play-out. This section describes the necessary settings that have to be made before playing out clips with the VENICE server.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

4.1.1 Selecting Content for Play-out

Before anything can be played out you have to determine the content for the output. By clicking on the triangle button to the left of the item **SOURCE**, the necessary settings can be expanded (or collapsed):

Figure 4-2: Setting the source

There are several ways to select content for a play-out:

1. You can enter the respective paths and file names manually.
2. You can select content via a dialog window.
3. You can drag and drop the content from one of the browsing panes of Spycer.

All these procedures will be explained in this section.

You can also play out a playlist. For this its play-out has to be set via the controls (see section "The Controls Explained" on page 4-15) and the list has to be set up/loaded in the playlist editor (see section "The List Editors" on page 7-3).

After a record operation (see chapter "Recording Clips" on page 5-1), the metaclip/batch list of the recorded content will be automatically set for a play-out. With this you can review the captured material immediately after a record.

For details about the buttons **APPEND TO LIST** and **INSERT INTO LIST** see section "Configuration Items" on page 6-2.

Entering Paths and File Names Manually

To select content for a play-out you can enter the respective paths and file names manually. Just start to enter something in the entry field for video/audio. This will open another dialog window where you can type in the respective path and clip name:

Figure 4-3: Entering a clip's path and name

In this window enter the path and file name of the clip on the VENICE server and confirm your entry with the **OK** button. The path must lead to the storage of the VENICE server to which you are currently connected, and it must be entered as if you were operating on the server locally.

When entering the file name for a single file, for example, for a clip in a container format (e.g. *`*.mxf`* or a VENICE metaclip), you can enter the file name as it is.

When entering the file name for a video clip that consists of still images, you have to observe the C notation usually with the syntax `<string>%0Yd.<ext>`:

`<string>`	Preceding string of file name
`%`	Marker that the following is a format string
`0`	If the output of the format string does not provide the stated length, fill it with zeros (`0`)
`Y`	Number of digits, for example, `5`
`d`	Marker that the format string is a decimal number
`<ext>`	File extension
Example:	`Hollywood_%05d.dpx` Indicates a clip with still image files of the name *`Hollywood_<5-digit number>.dpx`*

Perform this for video and audio separately with the available entry fields of the **SOURCE** settings.

Selecting Content Via a Dialog Window

To select content for a play-out you can use the buttons to the right of the entry fields (...). They will open each a dialog window similar to a browsing pane in Spycer:

This window is generated by Spycer. Without a Spycer application installed it will not be available.

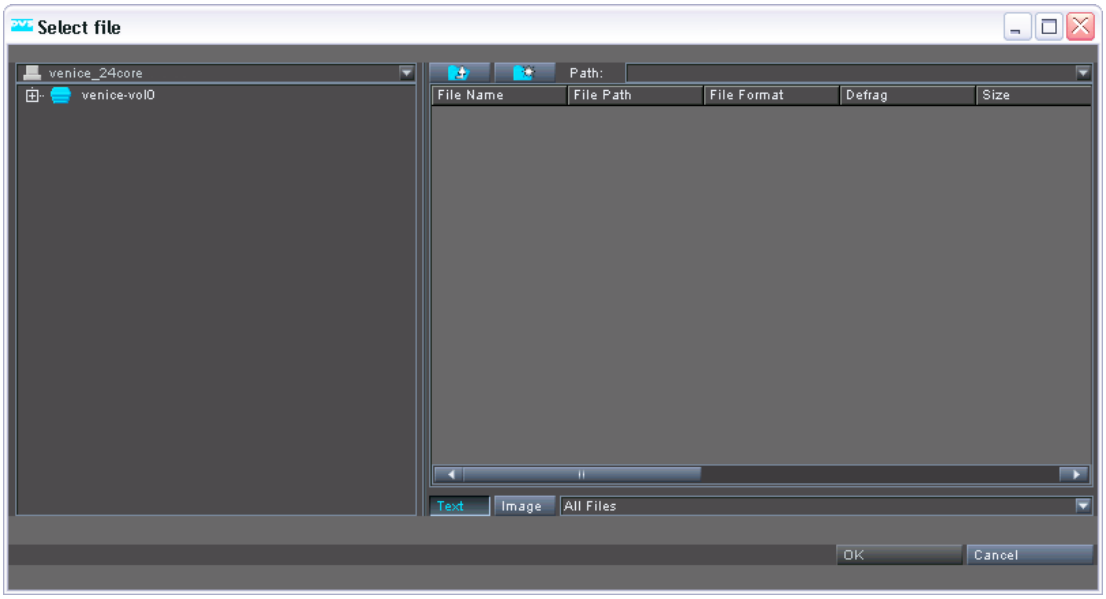


Figure 4-4: The dialog window to select content

This window shows you in the pane to the left in a directory tree the volumes/directories that are configured as watch folders in the Spycer application on the VENICE server. By clicking on the plus/minus signs in front of an entry the volume/directory can be expanded or collapsed.

Once a volume/directory has been selected, its contents will be displayed in the pane to the right. From there select the desired file and click on the **OK** button. Afterwards the path and file name of the clip will be displayed in the respective entry field of the **SOURCE** settings. You may have to perform this for video and audio separately.

This window provides more items than explained here. With a fully licensed Spycer it can even be used for a data management of the contents stored on the server (via the context menus you can e.g. copy, move, delete, defragment, etc.). Further information about this and the items provided by this window can be found in the “Spycer” user guide.

Selecting Content Via Spycer

You can drag and drop content directly from the browsing panes of Spycer to the user interface of the VENICE client software. This is the

most informative way to select content for a play-out, because with Spycer you can gather further information about the content beforehand or preview it.

Once the Spycer software is started, it shows two browsing panes where you can browse for data easily. Select from one of the network/system combo boxes the VENICE server to which you are currently connected and browse in the directory tree to the content that you want to play out. When the audio and/or video clips are displayed in a browsing pane of Spycer, they can be dragged and dropped anywhere on the user interface of the VENICE client software:

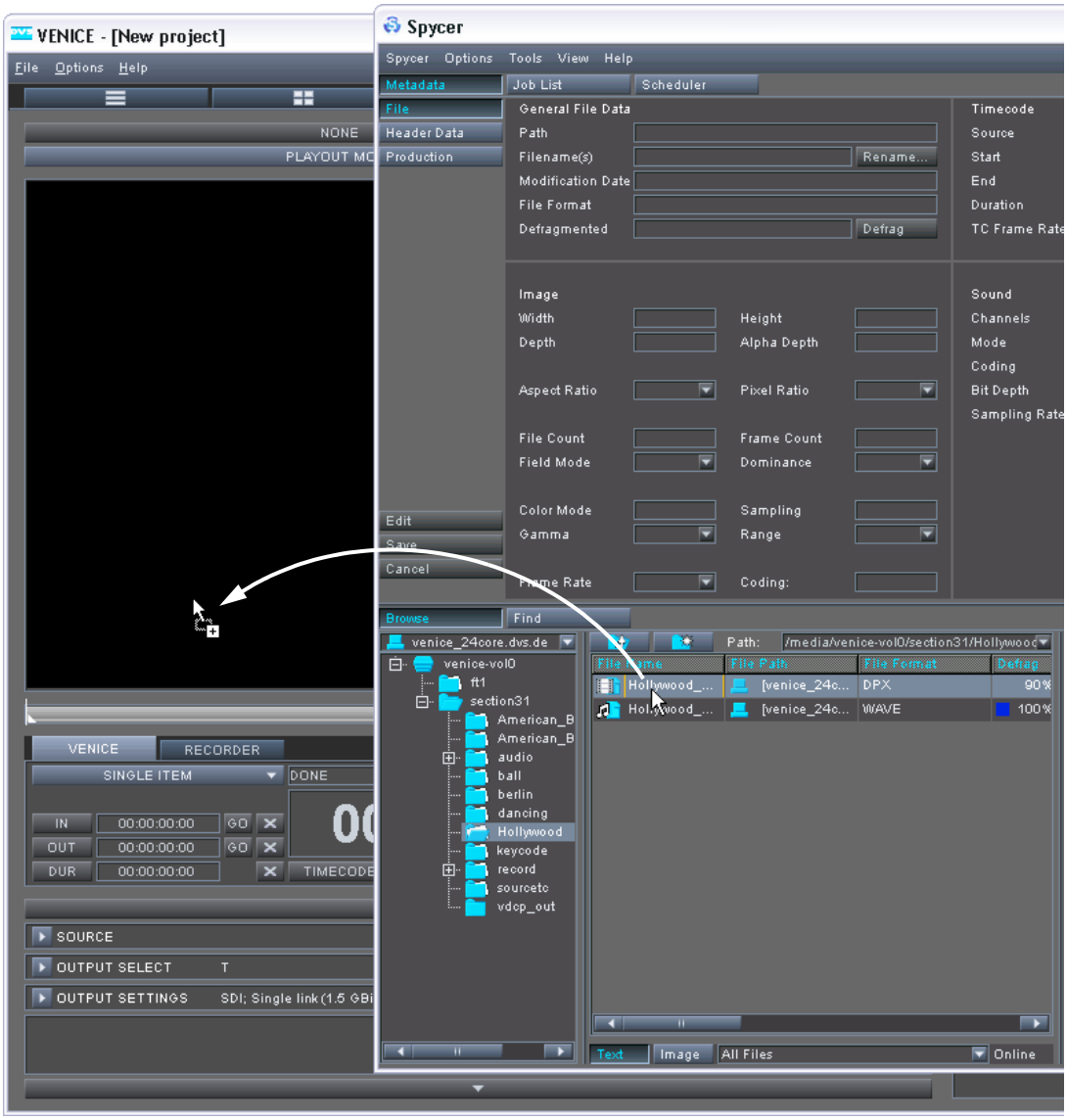


Figure 4-5: Drag and drop from Spycer

Afterwards the path and file name of the clip will be displayed in the respective entry field of the **SOURCE** settings. You may have to perform this for video and audio separately.

Alternatively, you can drag and drop a file directly on one of the entry fields of the **SOURCE** settings, which would take the file name of the dragged clip as if it were entered manually.

The content must be located on the storage of the VENICE server to which you are currently connected.

Further explanations of Spycer and its usage can be found in the "Spycer" user guide.

4.1.2 Selecting Essences for Play-out

With the **OUTPUT SELECT** settings of the playout mode you have to select the essences (type of material) that you want to play out. You can choose whether you want to play out audio, video/alpha or timecode, as well as all their combinations:

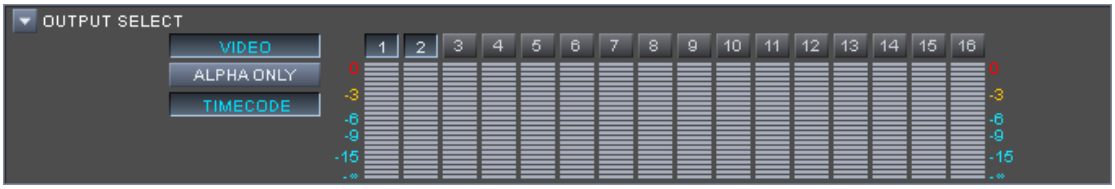


Figure 4-6: The output select items

When the **OUTPUT SELECT** settings are collapsed, the currently selected essences will be shown in abbreviated form to the right: `T` for timecode, `V` for video and `A<x>` for the selected audio channels.

As soon as video and/or audio content is available for a play-out (see section "Selecting Content for Play-out" on page 4-2), the matching essences will be activated in the user interface automatically.

It is not possible to give out timecode alone. At least one of the other essences has to be selected as well.

With the **OUTPUT SELECT** configurations choose the essences according to your needs. By activating or deactivating one of the provided buttons you can determine the essence that you want to play out. For example, if you want to play out video, the button **VIDEO** must be activated.

With the button **ALPHA ONLY** you can choose whether you want to play out the alpha channel (key) of the video material instead of video. Then the video overlay and the video outputs will show you the alpha channel mask of the video clip. The parts of the images displayed in white are selected, black areas are not selected (i.e. keyed out).

The audio channel buttons above the audio peakmeter represent the 16 audio channels that are provided by the VENICE server. If, for example, channels 1 and 2 are selected (as in the figure above), the audio

content will be played out at these channel outputs of the VENICE server. The audio channels of the audio clip will be routed each to its respective channel output at the VENICE server.

Further information about audio and the way it is handled can be found in section "About Audio" on page 2-20.

With the button **TIMECODE** you can determine that timecode information should be sent to the connected external device (LTC only). It will be especially useful when inserting data on tapes of a tape machine via the insert mode of the playout mode (see section "The Controls Explained" on page 4-15). Then you can explicitly select that the LTC timecode should be given out with this button.

4.1.3 Configuring the Output Settings

To play out video and audio you have to configure the output format appropriately via the **OUTPUT SETTINGS** items:

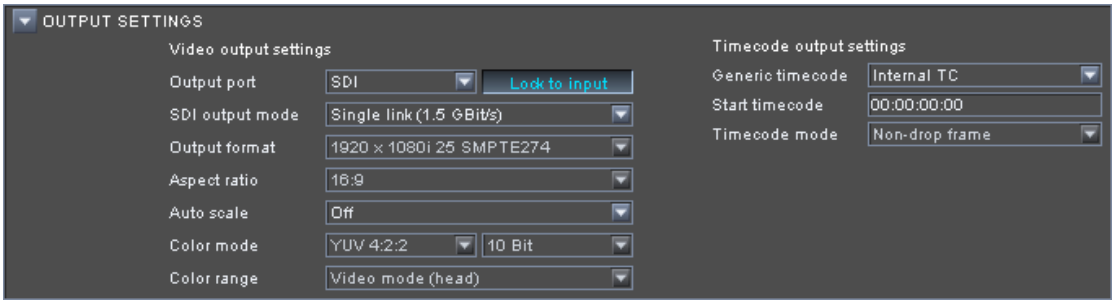


Figure 4-7: The output format settings items

By default the output settings are linked to the video format set for the ingest mode (button **LOCK TO INPUT** activated).

However, between the operation modes of the DVS software (see section "Selecting an Operation Mode" on page 2-9) different video format settings can be set. They will be applied to the connected video channel and available in each operation mode:

– In the playout mode you can determine the signal output (via the output settings), and
– in the ingest mode the signal input is configured (via the input settings, see section "Configuring the Input Settings" on page 5-3).

When the button **LOCK TO INPUT** is deactivated, you can change the output video format.

To view the signal of the external device in the video overlay of the playout mode, e.g. to check the position of a connected VTR, the input format of the ingest mode must be configured appropriately (see section "Configuring the Input Settings" on page 5-3).

Whether the **SDI output mode** and **Auto scale** settings are available depend on the hardware of the VENICE server.

With the settings items of the **OUTPUT SETTINGS** configure the output video format according to your needs:

Output port	Determines the output port of the video channel.
SDI output mode	Configures the speed of the SDI output (1.5 Gbit/s, 3.0 Gbit/s, or dual link).
Output format	Specifies the video raster, field mode and frame rate.
Aspect ratio	Details and, if possible, allows to set the aspect ratio of the video raster.
Auto scale	Enables you to scale and resize the video material if output format and the format of the video material are different. For further details see section "Configuration Items" on page 6-2.
Color mode	Determines the color space (e.g. YUV or RGB), the sampling frequencies (e.g. 4:4:4) and the color bit depth (e.g. 10 bit).
Color range	Specifies the color space range of the output, i.e. whether it is in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).

Once set, the respective format will be automatically applied to the appropriate output port(s) of the connected video channel. Additionally, the video overlay will change its format (e.g. its aspect ratio, see section "The Video Overlay" on page 4-10).

Furthermore, with the **OUTPUT SETTINGS** you can determine the timecode settings for the play-out:

Generic timecode	Determines the timecode type, i.e. whether an internal timecode or the source timecode provided by the files should be used (see also section “About Source Timecode” on page 2-21).
Start timecode	Specifies a timecode offset for the internal timecode.
Timecode mode	Specifies if drop-frame timecode should be applied to the internal timecode (for 29.97 Hz timecodes).

4.2 The Video Overlay

In the upper part of the user interface you can find the video overlay.

Figure 4-8: Video overlay

Depending on the selected device in the playout mode (see section "Controlling the Devices (Player / Recorder)" on page 4-14), you can use the video overlay either to view the input signal or the clips played out by the server:

– When the player controls are activated (VENICE), you can view the played out material.
– When the recorder controls are activated, you can view the input signal.

To view the signal from an externally connected device the input format must be set accordingly (see section "Configuring the Input Settings" on page 5-3).

By using the player/recorder controls you can, for example, start a playout or record or move within the displayed content. All this can be viewed via the video overlay.

When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the information area (see section "Information Area" on page 4-13).

4.3 The Scrub Bar / Shuttle Bar

Beneath the video overlay you can find a bar. Depending on the device selected for the current operation mode (player/recorder), it can provide either a scrub bar or a shuttle bar.

4.3.1 The Scrub Bar

The scrub bar will be available when the player controls are activated (see section “Controlling the Devices (Player / Recorder)” on page 4-14) and content is selected for a play-out (see section “Selecting Content for Play-out” on page 4-2).

Figure 4-9: The scrub bar

The scrub bar provides a timeline of the currently selected content. With its cursor ( ) you can move within and view it. Simply select the cursor with the mouse and move it along the scrub bar to the desired position. You can also click somewhere on the scrub bar to move the scrub bar cursor there instantly. While working with the scrub bar or the player controls (see section “Player Controls (VENICE)” on page 4-14), the video overlay will always adjust to your moves on the timeline of the selected content (see section “The Video Overlay” on page 4-10).

The blue line indicates the part of the timeline that is currently selected via in- and outpoint.

4.3.2 The Shuttle Bar

The shuttle bar is used to control an externally connected device via RS-422. It will be available when the recorder controls (external device) are activated (see section “Controlling the Devices (Player / Recorder)” on page 4-14) and the external device is set to accept remote control.

Figure 4-10: The shuttle bar

Use the slider of the shuttle bar to perform fast backward or forward operations. The slider will shuttle back to its zero position when dragged with the mouse and then released. Drag the slider to the left or right to move back- or forward in the video material of the external device. The farther you drag it, the faster the operation will be. While

dragging, the slider allows for a continuous setting of the speed in either direction from less than one (slow motion/jog) to a speed of ten times one (fast motion/shuttle).

By turning the scroll wheel of the mouse with the mouse cursor placed over the shuttle bar, the speed can be set without shuttling back to zero. When pressing either the [Shift], [Ctrl] or [Alt] key simultaneously, the slider steps made with the scroll wheel can be adjusted. A click of the mouse on the shuttle bar will shuttle the slider back to zero.

Speed (±)	State	Explanation
0.1 to 1	JOG	slow motion/jog
1 to 10	SHUTTLE	fast motion/shuttle

The VENICE client software will display the respective state of the external player in its information area (see section “Information Area” on page 4-13).

When connected correctly to the VENICE server and with the input format appropriately set, the video overlay will show you the current position of the externally connected device (input signal) and adjust to your moves accordingly (see section “The Video Overlay” on page 4-10).

4.4 Information Area

The information area can be found to the right of the tabs to select the player or recorder controls. It provides status information, for example, about dropped frames and about the external device connected via RS-422:

Figure 4-11: Information area

Error indications, such as missing syncs or dropped frames/audio samples, will be shown in the middle of the user interface. Missing syncs will be indicated for the video channel as well as an external device, depending on whether the player or recorder controls are currently activated. However, an error message about dropped frames, i.e. video or audio data that could not be read from or written to the storage in time, has priority over any other message. You can reset the dropped frames counter via the menu option ***Reset dropped frames display*** on the ***Options*** menu (see section "The 'Options' Menu" on page 8-3).

Individual frames missing in an image sequence consisting of still images, i.e. image files that are not present on the storage at all, are registered as drops.

To the right of the error messages the slave's status is displayed, providing you with details about the state of the external player connected to the remote output of the VENICE server. Further information about the different possible states can be found in section "States of an External Device" on page A-8.

4.5 Controlling the Devices (Player / Recorder)

In the playout mode the VENICE server assumes the role of the player while the external device is used as a recorder (see also section "Selecting an Operation Mode" on page 2-9). Via the tabs at the top of the player/recorder controls you can switch between the controls of the VENICE server and the controls of the recorder (see section "Performing the Operation" on page 2-11).

This section describes the controls available for the devices in detail. First the player controls are explained (tab **VENICE**) and after that the recorder controls (tab **RECORDER**).

4.5.1 Player Controls (VENICE)

With the tab **VENICE** in the playout mode activated the player controls are displayed and the video overlay will show you the currently selected content (see section "Selecting Content for Play-out" on page 4-2). The controls can then be used to move within or manually play out the selected content. Additionally, you can set an in- and/or outpoint for the content.

Figure 4-12: The player controls

You can use the items of the player controls as described in section "The Controls Explained" on page 4-15. The timeline that is controlled is the scrub bar (see section "The Scrub Bar" on page 4-11) of the selected content (single item or playlist).

Further information about lists and how to use them can be found in section "The List Editors" on page 7-3.

4.5.2 Recorder Controls (RECORDER)

When the tab **RECORDER** is activated in the playout mode, the recorder controls are displayed and the video overlay will show you the input signal. The controls can then be used to control an external device connected via RS-422, for example, to cue to a certain position and/or to start a record operation of the content that the VENICE server plays out.

A record can be performed in two different modes which can be set via a combo box at the top left of the recorder controls:

– The crash record mode allows you to start a record operation on the externally connected device at any time.

Figure 4-13: The recorder controls in the crash record mode

– The autoedit mode enables you to frame accurately record on the externally connected device the content that is played out with the VENICE server.

Figure 4-14: The recorder controls in the autoedit mode

You can use the items of the recorder controls as described in section "The Controls Explained" on page 4-15. The timeline that is controlled is the content of the external device, such as the tape of a VTR.

4.5.3 The Controls Explained

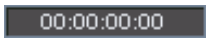
This section explains all controls available for the player or recorder in detail and thus provides a reference to them:

For more information about timecode/frame number fields and their format refer to section "About Timecode / Frame Number Fields" on page 2-18.

In addition to the controls, there are a lot of keyboard shortcuts available that can be used for a faster working with the software (see section "Keyboard Shortcuts" on page A-1).

You can select between the play-out of a single item or a playlist with this combo box (see section "Using Lists" on page 7-3).

The buttons **IN** and **OUT** enable you to set an in-/outpoint directly from the current position (normally shown in the position field). Move via the controls to the position that you want to set. Then press the respective button and the entry field to its right will take on the selected position. The entry field for the duration will be set accordingly as well.

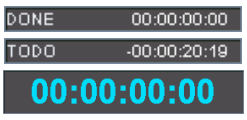


After entering a particular position/duration in one of the entry fields to the right of the **IN**, **OUT** and/or **DUR** button and pressing [Enter] the respective in-/outpoint or duration for the operation will be set.

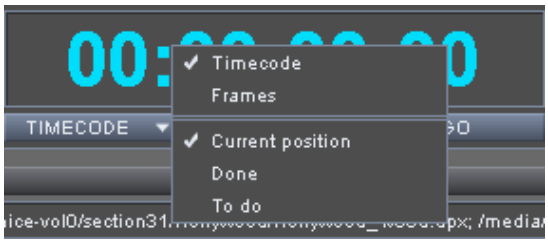
Whether the inpoint or outpoint should be changed when altering the duration can be set in the VENICE configurations (see "VENICE Administration and Configuration" user guide).

With the smaller **GO** buttons you can move to the associated point (in- or outpoint). When entering a new position in one of the entry fields to the left and afterwards pressing the respective **GO** button to the right, the in-/outpoint will be set accordingly and a goto procedure will be performed to the new position.

These buttons are toggle buttons that mark the respective in-/outpoint or duration for a deletion (when activating it for the duration, the button **DUR** will be made available). After clicking on the associated **IN**, **OUT** or **DUR** button, the in-/outpoint or duration will be deleted and set back to its default value.



By default these fields show the elapsed (**DONE**) and remaining (**TODO**) time of the item to be played out, recorded, etc., as well as the current position. Via their context menu you can configure which of the information to show in the fields:



When the larger field ('position field') shows the current position, you can use it to move to another one: Enter in it the new position and afterwards press [Enter] or the larger **GO** button.

With this combo box you can switch the notation of the position and length indicators for the currently activated controls between timecode and frames (see also section "Switching the Notation" on page 2-19).

After entering a new position in the position field you can confirm your entry and start a goto procedure by pressing this button. This button will not be available, if the position field is configured to show other information than the current position.

If available, you can play-out the timeline backwards with this button, i.e. it will start a reverse play-out. Once activated, the button changes its appearance to its active state. To stop the reverse play-out you can click it again.

This button switches on the back-to-back mode for playlists. When activated, instead of playing out the complete playlist, only the item where the play-out is started (position of the scrub bar cursor) will be played out.

If available, you can eject the tape of the externally connected device with this button.

With this button you can play out the contents of the timeline. After activation the button changes its appearance to its active state and you can press it again to stop the play-out.

With this button activated a play-out of the timeline will be performed endlessly in a loop: Once the the outpoint of the timeline is reached, the play-out will start from the inpoint again. To switch off the loop mode deactivate this button.

VENICE controls: This button activates the frames display mode, i.e. the frames of a video clip are shown when stepping backward or forward in the timeline. You can toggle to the fields display mode with the fields display mode button (see below).

External device controls: This button stops the current operation of the externally connected device.

If available, this button activates the fields display mode, i.e. the fields of a video clip are shown when stepping backward or forward in the timeline. You can toggle to the frames display mode with the frames display mode button (see above).

With these buttons you can step one video field/ frame for- or backward in the timeline.

You can jump to particular points on the timeline (e.g. timeline begin, inpoint, outpoint, or timeline end) with these buttons. The first button jumps to the point that is previously located on the timeline while the second button jumps to the next one.

You can jump to the timeline begin or timeline end with these buttons. The first button jumps to the very first frame of the timeline while the second button jumps to the very last one.

These buttons initiate a fast backward or forward operation of the external player. After activation the respective button will change its appearance to its active state and you can press it again to stop the operation.

Determines the speed of the played out material. Either enter a speed in percent in the entry field to the right or use the slider to set it. A double-click on the slider sets it back to 100%.

With the **INSERT/ASSEMBLE** combo box you determine whether data (e.g. on VTRs) should be inserted or overwritten. While the assemble mode usually overwrites all data (video, audio and time-code) on the tape of the external device, in the insert mode you can select via the **OUTPUT SELECT** settings the data that should be sent to the external device (see section “Selecting Essences for Play-out” on page 4-6).

Once the record is set up correctly, you can start it with these buttons. Then the respective button changes its appearance to its active state and the capturing begins: In the crash record mode it starts immediately, and in the autoedit mode it may account for preroll, postroll, etc. In case it is necessary to terminate the record, you have to click the button again.

4.6 Playing Out with the VENICE Server

In the playout mode (see section "Selecting an Operation Mode" on page 2-9) you can play out the currently selected content:

– You can play out content manually.
– You can perform a crash record on an externally connected device.
– You can perform an automated play-out of the content while at the same time frame accurately recording it on the externally connected device (autoedit record).
– You can set the playout mode into slave mode to control the play-out from an externally connected device.

All these procedures are explained in this section.

When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the information area (see section "Information Area" on page 4-13).

4.6.1 How to Play Out Clips Manually

To play out clips in the playout mode perform the steps as described below:

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

- Select the video and audio content that should be played out with the **SOURCE** items as described in section "Selecting Content for Play-out" on page 4-2.
- If necessary, specify the essences for the play-out with the **OUTPUT SELECT** items (see section "Selecting Essences for Play-out" on page 4-6).
- If necessary, configure the output format to your requirements with the **OUTPUT SETTINGS** items (see section "Configuring the Output Settings" on page 4-7).
- If not already activated, switch to the player controls by selecting the tab **VENICE** (see section "Controlling the Devices (Player / Recorder)" on page 4-14).

As soon as the player controls are activated and video content is selected for a play-out, the video overlay will show you the selected content.

- If wanted, set an in-/outpoint or duration for the content to be played out (see section “Player Controls (VENICE)” on page 4-14).
- Afterwards press the play button ( ) of the player controls.

The VENICE server then performs the play-out: The video content will be displayed in the video overlay and video as well as audio will be given out at the outputs of the VENICE server.

4.6.2 How to Crash Record with the External Device

In the playout mode you can perform a crash record on the externally connected device. It will then immediately record the signal that is present at its input, e.g. the content that is played out manually with the VENICE server.

To initiate a crash record perform the steps as described below:

For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

A crash record can be started without further ado, meaning, if not required, you do not have to set anything. However, you can record the signal given out by the VENICE server (see section “How to Play Out Clips Manually” on page 4-19).

- If not already activated, switch to the recorder controls by selecting the tab **RECORDER** (see section “Controlling the Devices (Player / Recorder)” on page 4-14).
- Make sure that the crash record mode is selected (see section “Recorder Controls (RECORDER)” on page 4-14).
- If appropriate, use the recorder controls and the video overlay to move to the correct position on the external device for the data to be recorded.
- Afterwards press the record button ( ) of the record controls.

The external device will then start the record and as an indication for this the characters of the position field turn red. The video overlay will show you what is present at the server’s input. You can terminate the record manually whenever you want by clicking the record button again.

4.6.3 How to Autoedit Record with the External Device

In the autoedit record mode you can control a play-out by the VENICE server while at the same time recording it frame accurately with the external device. The following describes what to do to perform an autoedit record.

For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

Setting up the Playout Mode

To perform an autoedit record in the playout mode you first have to configure what and how to play out with the VENICE server:

- Select the video and audio content that should be played out with the **SOURCE** items as described in section "Selecting Content for Play-out" on page 4-2.
- If necessary, specify the essences for the play-out with the **OUTPUT SELECT** items (see section "Selecting Essences for Play-out" on page 4-6).
- If necessary, configure the output format to your requirements with the **OUTPUT SETTINGS** items (see section "Configuring the Output Settings" on page 4-7).
- If not already activated, switch to the player controls by selecting the tab **VENICE** (see section "Controlling the Devices (Player / Recorder)" on page 4-14).

As soon as the player controls are activated and video content is selected for a play-out, the video overlay will show you the selected content.

- If wanted, set an in-/outpoint or duration for the content to be played out (see section "Player Controls (VENICE)" on page 4-14).

After this you have successfully set up the VENICE server for a play-out and you now have to configure the external device for the record.

Configuring the External Device for the Record

To record the output of the VENICE server with the external device the device has to be set up properly:

- If not already activated, switch to the recorder controls by selecting the tab **RECORDER** (see section "Controlling the Devices (Player / Recorder)" on page 4-14).
- Make sure that the autoedit record mode is selected (see section "Recorder Controls (RECORDER)" on page 4-14).
- Use the recorder controls and the video overlay to search for the exact inpoint in the material of the externally connected device.
- Press the **IN** button to set the inpoint to the selected position. Alternatively, you can enter the respective position manually in the entry field of the inpoint and afterwards press [Enter].
- After that use the controls to move to the desired outpoint in the material.
- Click on the button **OUT** or enter the position in the respective entry field to the right of the **OUT** button and afterwards press [Enter].

With this the selected in- and outpoint will be shown in the associated entry fields of the record controls and the duration will be set accordingly.

Alternatively, you may also specify one of the entries for in- or outpoint and afterwards set the duration of the record.

As the next step you have to start the record.

Starting the Record

When everything is set up properly, you can start the autoedit record at any time:

- To start the autoedit record press the button **AUTO EDIT** of the record controls (AUTO EDIT).

The VENICE server will then initiate the record on the external device: The external device will go to its preroll position and start playing from there. As soon as the specified inpoint is reached, the play-out of the server starts and the external device performs the record up to the set outpoint/duration (characters in the position field turn red). After this the play-out operation of the VENICE server stops automatically. Once the external device stops its operation (postroll), the video material has been recorded successfully on the external device.

To terminate the autoedit record manually you have to click the record button again.

4.6.4 How to Perform a Play-out in Slave Mode

In the playout mode you can control the video channel on the VENICE server by remote and send a play command. After receiving the command the channel will play out the currently selected content according to the settings specified with the operation mode configurations.

To prepare the video channel for a slave mode play-out perform the following:

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

- Select the video and audio content that should be played out with the **SOURCE** items as described in section "Selecting Content for Play-out" on page 4-2.
- If necessary, specify the essences for the play-out with the **OUTPUT SELECT** items (see section "Selecting Essences for Play-out" on page 4-6).
- If necessary, configure the output format to your requirements with the **OUTPUT SETTINGS** items (see section "Configuring the Output Settings" on page 4-7).
- Then select the protocol that should be used for the slave mode and press the button **RMT OFF** (see section "Slave Mode" on page 2-12).

After this the button will be labelled **RMT ON** indicating that the slave mode is activated. Then the VENICE server waits for a play-out command to begin the play-out.

To stop the slave mode play-out perform the following:

- Either send the respective command or terminate the slave mode by clicking on the remote button again (i.e. deactivate the button **RMT ON**).

The VENICE server then stops the slave mode play-out of the selected content.

Recording Clips

With a connection to a video channel of the VENICE server established (see section “Getting Started” on page 2-3) you can use this channel for record operations. For this the VENICE client software must be in the **INGEST MODE** (see section “Selecting an Operation Mode” on page 2-9).

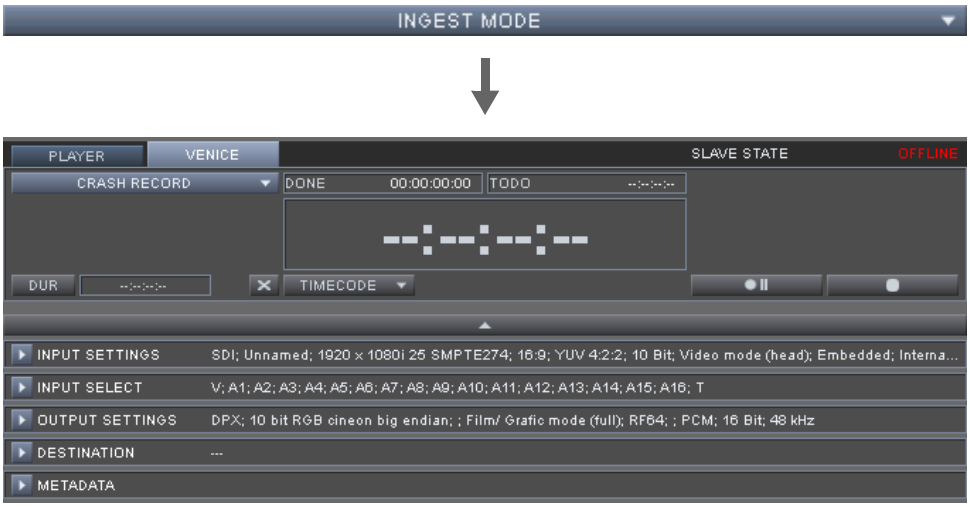

INGEST MODE
PLAYER
VENICE
SLAVE STATE
OFFLINE
CRASH RECORD
DONE
00:00:00:00
TODO
DUR
TIMECODE
INPUT SETTINGS
SDI; Unnamed; 1920 x 1080i 25 SMPTE274; 16:9; YUV 4:2:2; 10 Bit; Video mode (head); Embedded; Interna...
INPUT SELECT
V; A1; A2; A3; A4; A5; A6; A7; A8; A9; A10; A11; A12; A13; A14; A15; A16; T
OUTPUT SETTINGS
DPX; 10 bit RGB cineon big endian; ; Film/ Grafic mode (full); RF64; ; PCM; 16 Bit; 48 kHz
DESTINATION
METADATA

Figure 5-1: Controls and configurations of the ingest mode

In the ingest mode you have the following possibilities at hand:

- You can configure all input related settings.
- You can control the VENICE server for a record of clips.
- You can control an externally connected device, for example, to verify a position and set in- and/or outpoint.
- You can control the externally connected device for a play-out operation while simultaneously recording with the VENICE server.
- You can set the VENICE server in slave mode for a remote controlled record.

This chapter describes how to record clips on the VENICE server with the VENICE client software.

Because most items described in this chapter are identical and can be used same way as in the playout mode, the following sections will often just reference to the descriptions of the items in chapter “Playing Out Clips” on page 4-1. However, the important differences will be mentioned.

5.1 Configuring a Record

Before a record can be performed with the connected video channel of the VENICE server you have to set up the record and the input related settings (see also section "Configuring the Operation Mode" on page 2-9). As a minimum you have to determine the location of the record. This section describes the necessary settings that have to be made before capturing with the VENICE server.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

5.1.1 Configuring the Input Settings

To record video and audio with the VENICE server, you have to configure the input format appropriately. By clicking on the triangle button to the left of the item **INPUT SETTINGS**, the necessary settings can be expanded (or collapsed):

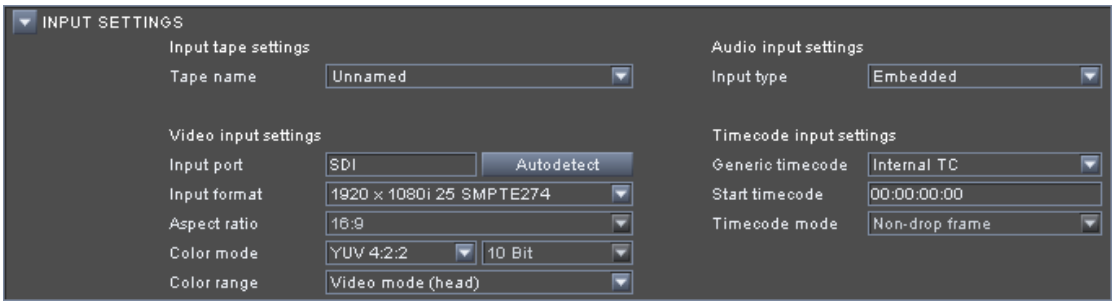


Figure 5-2: The input format settings items

Between the operation modes of the VENICE server (see section "Selecting an Operation Mode" on page 2-9) different video format settings can be set (see section "Configuring the Output Settings" on page 4-7).

With the settings items of the **INPUT SETTINGS** configure the input video format so that it matches the incoming video signal. You may also use the **AUTODETECT** button to let the VENICE server detect the video

format of the input signal automatically. Each time the ingest mode is activated, an autodetect is automatically performed.

Tape name	Specifies the name of the tape (reel) for the video material to be recorded. Its entry will be saved as metadata for your clip and written into the file headers of the recorded files (if supported by the file format). Furthermore, this information will be used during a batch record to indicate different sources/tapes.
Input port	Indicates the input port of the video channel.
Input format	Specifies the video raster, field mode and frame rate.
Aspect ratio	Details and, if possible, allows to set the aspect ratio of the video raster.
Color mode	Determines the color space (e.g. YUV or RGB), the sampling frequencies (e.g. 4:4:4) and the color bit depth (e.g. 10 bit).
Color range	Specifies the color space range of the input, i.e. whether it is in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).

Once set, the respective format will be automatically applied to the appropriate input port(s) of the VENICE server as well as to the video overlay of the VENICE client software. Afterwards some of the file formats for a capturing may not be available anymore due to the selected video raster or color space.

Furthermore, with the **INPUT SETTINGS** you can determine the audio input and timecode settings for the record:

Input type	Determines the audio input, i.e. whether audio embedded in video (AIV) or the signal that is present at the digital audio inputs should be recorded.
Generic timecode	Determines the type of timecode that should be written as the generic source timecode into the files' headers (if supported by the file format, see also section "About Source Timecode" on page 2-21).
Start timecode	Specifies a timecode offset for the internal timecode.

Timecode mode	Specifies if drop-frame timecode should be applied to the internal timecode (for 29.97 Hz timecodes).

The input video format has to match the incoming signal, i.e. it must be of the same format and raster as the incoming signal.

5.1.2 Selecting Essences for Record

With the **INPUT SELECT** settings of the ingest mode you have to select the essences (type of material) that you want to capture. You can choose whether you want to record audio or video alone, or both together:

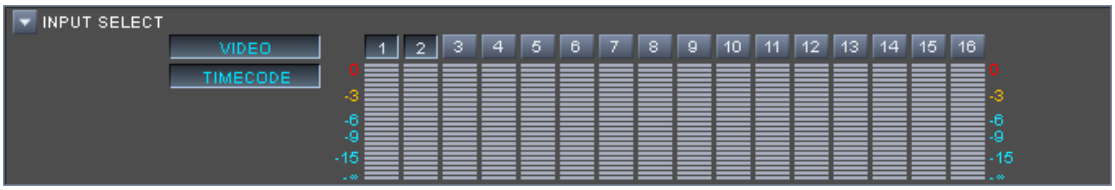


Figure 5-3: The input select items

When the **INPUT SELECT** settings are collapsed, the currently selected essences will be shown in abbreviated form to the right: `T` for timecode, `V` for video and `A<x>` for the selected audio channels.

The software may automatically activate/deactivate essences so that they match the current configurations, for example, when the video input format is switched manually (see section "Configuring the Input Settings" on page 5-3) or another file format is selected (see section "Configuring the Output Settings (File Settings)" on page 5-6).

With the **INPUT SELECT** settings choose the essences according to your needs. By activating or deactivating one of the provided buttons you can determine the essence that you want to capture. For example, if you want to capture video, the button **VIDEO** must be activated.

The audio channel buttons above the audio peakmeter represent the 16 audio channels that are provided by the VENICE server. If, for example, channels 1 and 2 are selected (as in the figure above), the audio signals that are available at these channels of the VENICE server will be captured.

Further information about audio and the way it is handled in the DVS software can be found in section "About Audio" on page 2-20.

Currently the button **TIMECODE** provides no functionality.

5.1.3 Configuring the Output Settings (File Settings)

With the **OUTPUT SETTINGS** items you determine the file format(s) of the file(s) to be recorded:

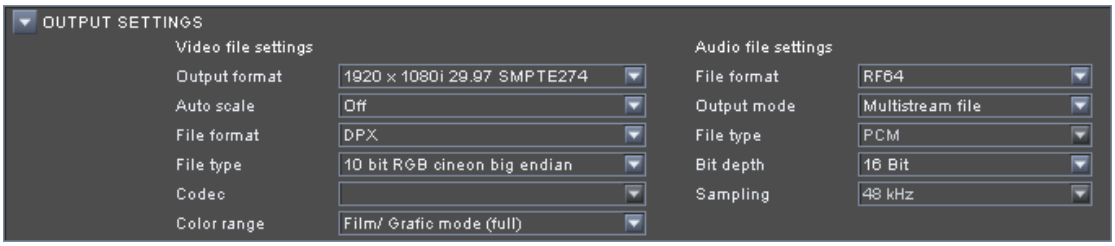


Figure 5-4: The file format settings

These settings are connected to the input settings. Some of the file formats may not be available due to the selected input video format.

Whether the **Output format** and **Auto scale** settings are available depend on the hardware of the VENICE server.

Use the items under **Video file settings** to set the format for image/ video file(s):

Output format	Determines the video raster, field mode and frame rate.
Auto scale	Enables you to scale and resize the video material if output format (file settings) and input format are different. For further details see section “Configuration Items” on page 6-2.
File format	Sets the file format (see also section “Supported File Formats” on page A-3).
File type	Details and, if possible, allows to set codec or file type for the selected file format (to determine bit depth and/or byte order settings).
Codec	For compressed file formats: Determines the type of compression.
Color range	Specifies the color space range of the files, i.e. whether they will be in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).

Under **Audio file settings** you can specify the file format for the audio file(s) further:

Whether these settings are available depend on the selected file format.

Further information about audio and the way it is handled in the DVS software can be found in section “About Audio” on page 2-20.

File format	Sets the file format (see also section “Supported File Formats” on page A-3).
Output mode	Determines the output format of the audio files, i.e. whether they are stored as individual mono files or a single file containing multiple channels.
File type	Details the file type for the selected file format.
Bit depth	Specifies the resolution (bit depth) of the audio files.
Sampling	Indicates the sampling rate of the audio data.

5.1.4 Selecting the Storage Location and File Name

Before performing a record you have to determine the name of the captured file(s) and where to save them:

Figure 5-5: The file name and path settings

The file name has to be entered manually, but there are several ways to set a record path:

1. You can enter the respective path manually.
2. You can select a path via a dialog window.
3. You can drag and drop a path from one of the browsing panes of Spycer.

All these procedures will be explained in this section.

You can also capture a batch list. For this its record has to be set via the controls (see section “Recorder Controls (VENICE)” on page 5-14) and the list has to be set up or loaded in the batch list editor (see section “The List Editors” on page 7-3).

After a record operation the metaclip/batch list of the recorded content will be automatically set for a play-out (see chapter “Playing Out Clips” on page 4-1). With this you can review the captured material immediately after a record.

Once a path has been selected, the **Disk capacity** item shows you graphically the amount of disk space that is currently used/free on the entered storage (bar and percentage value). The time values of the used and free disk space depend on the currently configured input settings (video raster).

Entering a File Name and Path Manually

You can enter the file name and path for a record manually with the entry fields of the **DESTINATION** settings. Just start to enter something in the entry fields and another dialog window will be opened where you can type in the respective file name or path:

Figure 5-6: Entering a file name or path

In this window enter the file name or path for the record on the VENICE server and confirm your entry with the **OK** button. Perform this for the file name and path the separately with the available entry fields.

The path must lead to the storage of the VENICE server to which you are currently connected, and it must be entered as if you were operating on the server locally.

When entering a file name for the record, you just have to enter the prefix without any numbering or file extension. These will be provided by the software automatically. If a file name is not specified, the default name *NewClip* will be given to the recorded clip.

The software arranges the clips numerically, meaning the recorded clips will carry a consecutive number which will be added to the file name in a certain way (see section “The Captured Files” on page 5-10). To the right of the field **File name** is a field that shows you the number that will be used for the next record.

As a standard for every new file name the numbering starts with 000/--- meaning that no numbering will be added (the number will be added though when more clips with the same name are recorded). After a record operation the consecutive number is automatically increased by one which ensures that a once captured clip will not be overwritten if the file name remains unaltered.

When entering a path together with a directory that does not exist, it will be created when clicking the **OK** button.

Selecting a Path Via a Dialog Window

For the selection of a record path you can use the button to the right of the entry field **Path** of the **DESTINATION** settings (...). It will open a dialog window similar to a browsing pane in Spycer.

This window is generated by Spycer. Without a Spycer application installed it will not be available.

Browse in the directory tree of this window to the directory where the recorded files should be stored. You may also create a new directory via the provided buttons of this window.

Once a directory has been selected, confirm it with the **OK** button. Afterwards the path will be displayed in the respective entry field of the **DESTINATION** settings. For any further information about this window see section "Selecting Content Via a Dialog Window" on page 4-4 as well as the "Spycer" user guide.

Selecting a Path Via Spycer

You can drag and drop the path for a record directly from a browsing pane of Spycer to the user interface of the VENICE client software.

In one of the available browsing panes select from one of the network/system combo boxes the VENICE server to which you are currently connected and browse in the directory tree to the directory where the recorded files should be stored. Then take this directory and drag and drop it anywhere on the user interface of the VENICE client software.

Afterwards the path will be displayed in the respective entry field of the **DESTINATION** settings. For any further information about this see section "Selecting Content Via Spycer" on page 4-4.

The directory must be located on the storage of the VENICE server to which you are currently connected.

Further explanations of Spycer and its usage can be found in the "Spycer" user guide.

5.1.5 Entering Metadata

The metadata configuration settings are available for the Avid workflow:

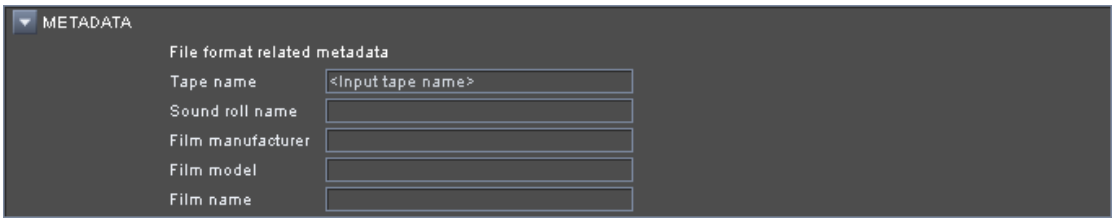


Figure 5-7: The metadata settings

For further information about this see section “Avid Workflow” on page 2-22.

5.1.6 The Captured Files

The video and audio data captured during a record will be stored at the location set with the **DESTINATION** settings items (see section “Selecting the Storage Location and File Name” on page 5-7).

For the generated items one metaclip will be created (see section “Metaclips” on page 2-17) directly at the selected location.

The names for the created items will take the field **File name** of the **DESTINATION** settings items as the prefix. Behind this, in case of further records with the same file name, the consecutive number will be added.

When recording with VENICE this would lead to the following generated items:

Container Formats

Metaclip:	*<prefix><consecutiveNo>.vamc*
Data subfolder:	–
Container file:	*<prefix><consecutiveNo>.<ext>*

Most container files will be stored at the selected location directly. However, if several files are generated they may get sorted into a subfolder with the name *<prefix><consecutiveNo>*. If a P2 format has been selected, the P2 data structure will be observed.

With container file formats audio and video are normally recorded both in the same file. But in case audio is created in separate files, they will carry the following names:

Audio files (container format):	*<prefix><consecutiveNo>A<channelNo>.<ext>*

In case you have selected an audio-only file format for audio, the files will be named as detailed under 'Still Image Formats'.

Still Image Formats

Metaclip:	*<prefix><consecutiveNo>.vamc*
Data subfolder:	*<prefix><consecutiveNo>*

The file names of still image formats will be followed by an underscore and an increasing 7-digit number for the individual image files (file/frame number):

Still image files:	*<prefix><consecutiveNo>_<file/frameNo.>.<ext>*

If audio is recorded as well, the audio files will provide the same file name but without the frame numbering. Instead, for mono files the channel number will be added:

Audio files (multichannel):	*<prefix><consecutiveNo>.<ext>*
Audio files (mono):	*<prefix><consecutiveNo>_<channelNo>.<ext>*

5.2 The Video Overlay

In the upper part of the user interface you can find the video overlay.

Figure 5-8: Video overlay

In the ingest mode the video overlay will always show the signal that is present at the input of the video channel.

The input video raster has to match the incoming signal, i.e. the set video raster for the input must be of the same raster as the incoming signal (see also section "Configuring the Input Settings" on page 5-3).

By using the controls of the player you can, for example, start a play-out of the external device or move within the displayed content. All this can be viewed via the video overlay.

When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the information area (see section "Information Area" on page 4-13).

5.3 The Shuttle Bar

The shuttle bar is used to control an externally connected device via RS-422. It will be available when the player controls (external device) are activated (see section “Player Controls (PLAYER)” on page 5-14) and the external device is set to accept remote control.

Apart from this the shuttle bar of the ingest mode is identical to the one of the playout mode. For further information about it please refer to section “The Shuttle Bar” on page 4-11.

5.4 Information Area

The information area of the ingest mode is identical to the one of the playout mode. For further information about it please refer to section “Information Area” on page 4-13.

5.5 Controlling the Devices (Player / Recorder)

In the ingest mode the VENICE server assumes the role of the recorder while the external device is used as a player (see also section "Selecting an Operation Mode" on page 2-9). Via the tabs at the top of the player/recorder controls you can switch between the controls of the VENICE server and the controls of the player (see section "Performing the Operation" on page 2-11).

This section describes the controls available for the devices in detail. First the player controls are explained (tab **PLAYER**) and after that the recorder controls (tab **VENICE**).

5.5.1 Player Controls (PLAYER)

With the tab **PLAYER** in the ingest mode activated the player controls are displayed. The controls can then be used to move within or manually play out the material of the external device, for example, to set up its play-out position. Additionally, you can set an in- and/or outpoint for the material.

Figure 5-9: The player controls

You can use the items of the player controls as described in section "The Controls Explained" on page 4-15 and section "The Controls Explained" on page 5-15. The timeline that is controlled is the content of the external device, such as the tape of a VTR.

5.5.2 Recorder Controls (VENICE)

When the tab **VENICE** is activated in the ingest mode, the recorder controls are displayed. They can then be used to start a record operation with the VENICE server.

A record can be performed in several different modes which can be set via a combo box at the top left of the recorder controls:

– The crash record mode allows you to start a record operation on the VENICE server at any time.

Figure 5-10: The recorder controls in the crash record mode

– The autoedit mode enables you to frame accurately play out with the externally connected device and record this with the VENICE server.

Figure 5-11: The recorder controls in the autoedit mode

– In the batch record mode you can use a batch list to perform several autoedit capture operations in a single step.

Figure 5-12: The recorder controls in the batch record mode

Further information about lists and how to use them can be found in section “The List Editors” on page 7-3.

You can use the items of the recorder controls as described in section “The Controls Explained” on page 4-15 and section “The Controls Explained” on page 5-15.

5.5.3 The Controls Explained

This section explains the controls that are especially available for the player or recorder in the ingest mode. The ones not described are iden-

tical to the controls in the playout mode. For a description of them please refer to section “The Controls Explained” on page 4-15.

This button is available on the player controls when the batch record mode is selected. It appends the currently configured autoedit record operation (tape name, inpoint, outpoint, destination, etc.) to the batch list (see also section “Adding Items to a List” on page 7-4).

This button is available in the crash record mode of the ingest mode. With it you can pause a record in progress, and by clicking it again you can continue the record whenever you want without creating a new clip in the process.

With this combo box you can specify a batch record further, i.e. whether the complete batch list should be recorded or the currently selected items only.

5.6 Recording with the VENICE Server

In the ingest mode (see section “Selecting an Operation Mode” on page 2-9) you can perform record operations with the VENICE server:

– You can control an externally connected device via RS-422, for example, to verify its position, set edit points or view its material.
– You can perform a crash record with the VENICE server.
– You can perform an autoedit record with RS-422 control of the externally connected player.
– You can set the ingest mode into slave mode to control a record on the VENICE server from an externally connected device.
– You can perform a batch list record.
– You can read material while it is still being recorded.

All these procedures are explained in this section.

When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the information area (see section “Information Area” on page 4-13).

5.6.1 How to Control the External Device

For a record operation you may want to control an external device connected via RS-422 with the VENICE client software, for example, to verify its position, set edit points or view (play out) its material. To do this perform the following:

For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 2-15).

- If not already activated, switch to the player controls by selecting the tab **PLAYER** (see section “Controlling the Devices (Player / Recorder)” on page 5-14).
- Use the player controls and the video overlay to search for a certain position or to play out the material of the externally connected device.

With this the external device can be controlled and you can, for example, verify the material. However, for an autoedit record with the VENICE server an in- and outpoint should be set as well, which will be explained next:

- Use the player controls and the video overlay to search for the exact position for the inpoint in the material of the externally connected device.
- Press the **IN** button to set the inpoint to this position. Alternatively, you can enter the respective position manually in the entry field of the inpoint and afterwards press [Enter].
- After that use the controls to move to the desired outpoint in the material.
- Click on the button **OUT** or enter the position in the respective entry field to the right of the **OUT** button and afterwards press [Enter].

With this the selected in- and outpoint will be shown in the associated entry fields of the player controls and the duration will be set accordingly.

Alternatively, you may also specify one of the entries for in- or outpoint and afterwards set the duration of the play-out.

When this is finished you can, for example, start an autoedit record as described in section "How to Autoedit Record with the VENICE Server" on page 5-19.

5.6.2 How to Crash Record with the VENICE Server

In the ingest mode you can perform a crash record with the VENICE server. It will then immediately record, according to your settings, the signal that is present at its input, e.g. the content that is played out manually with an external device (see section "How to Control the External Device" on page 5-17).

To initiate a crash record perform the steps as described below:

- If necessary, configure the input format so that it matches the signal present at the server's input with the **INPUT SETTINGS** items (see section "Configuring the Input Settings" on page 5-3).
- Determine a file name and path for the file(s) to be recorded with the **DESTINATION** items as described in section "Selecting the Storage Location and File Name" on page 5-7.
- If necessary, specify the essences that you want to record with the **INPUT SELECT** items (see section "Selecting Essences for Record" on page 5-5).

- If necessary, set up the file format(s) of the file(s) to be recorded via the **OUTPUT SETTINGS** items (see section "Configuring the Output Settings (File Settings)" on page 5-6).
- In case you want to record on Avid's ISIS or Interplay (file format `MXF (for ISIS & Interplay)`), you can specify metadata for the recorded files with the **METADATA** items (see also section "Avid Workflow" on page 2-22).
- Then, if not already activated, switch to the recorder controls by selecting the tab **VENICE** (see section "Controlling the Devices (Player / Recorder)" on page 5-14).
- Make sure that the recorder controls are set to the crash record mode (see section "Recorder Controls (VENICE)" on page 5-14).
- If wanted, type in the duration that the record should last in the **DUR** field.
- Afterwards press the record button ( ) of the record controls.

The VENICE server will then start the record and as an indication for this the characters of the position field turn red. The video overlay will show you what is present at the server's input. Once the captured clip corresponds to the set duration in the field **DUR**, the record operation will be stopped automatically. If no duration is set, you can terminate the record manually whenever you want by clicking the record button again.

With the pause record button ( ) you can pause the record in progress, and by clicking it again you can continue the record without creating a new clip.

When the record has finished, you can switch to the playout mode and review the recorded material immediately: The metaclip of the captured clip will be automatically set as the content to be played out (see section "Selecting Content for Play-out" on page 4-2).

5.6.3 How to Autoedit Record with the VENICE Server

In the ingest mode you can perform an autoedit record with the VENICE server while at the same time frame accurately controlling the

play-out of the externally connected player. The following describes what to do to perform an autoedit record.

For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

Setting up the Ingest Mode

To perform an autoedit record in the ingest mode you first have to configure where and how to record with the VENICE server:

- If necessary, configure the input format so that it matches the signal present at the server's input with the **INPUT SETTINGS** items (see section "Configuring the Input Settings" on page 5-3).
- Determine a file name and path for the file(s) to be recorded with the **DESTINATION** items as described in section "Selecting the Storage Location and File Name" on page 5-7.
- If necessary, specify the essences that you want to record with the **INPUT SELECT** items (see section "Selecting Essences for Record" on page 5-5).
- If necessary, set up the file format(s) of the file(s) to be recorded via the **OUTPUT SETTINGS** items (see section "Configuring the Output Settings (File Settings)" on page 5-6).
- In case you want to record on Avid's ISIS or Interplay (file format `MXF (for ISIS & Interplay)`), you can specify metadata for the recorded files with the **METADATA** items (see also section "Avid Workflow" on page 2-22).

After this you have successfully set up the VENICE server for a record operation and you now have to configure the external device for the play-out.

Setting up the External Device for the Play-out

To perform an autoedit record in the ingest mode you have to set up the external device properly so that it will play out the correct material during the record operation:

- Perform the steps described in section "How to Control the External Device" on page 5-17 and set an in- and outpoint for the play-out.

When this is done, you can start the record.

Starting the Record

When everything is set up properly, you can start the autoedit record at any time:

- If not already activated, switch to the recorder controls by selecting the tab **VENICE** (see section "Controlling the Devices (Player / Recorder)" on page 5-14).
- Make sure that the recorder controls are set to the autoedit record mode (see section "Recorder Controls (VENICE)" on page 5-14).
- To start the autoedit record press the button **AUTO EDIT** of the record controls (

).

  The record controls will be unavailable when the input settings are not set to the same raster as present at the input and/or the external player is not set to accept remote control.

The VENICE server then performs the record in accordance with your settings: The external player will go to its preroll position and start playing from there. The video overlay will show you what is present at the server's input. As soon as the specified inpoint on the external player is reached, the record is performed by the VENICE server up to the point of the set outpoint/duration. During the record the characters of the position field turn red. Once the outpoint is reached, the record will be terminated automatically.

To terminate the autoedit record manually you have to click the record button again.

When the record has finished, you can switch to the playout mode and review the recorded material immediately: The metaclip of the captured clip will be automatically set as the content to be played out (see section "Selecting Content for Play-out" on page 4-2).

5.6.4 How to Perform a Slave Mode Record

In the ingest mode you can control the video channel on the VENICE server by remote and send a record command. After receiving the command the channel will record the incoming signal according to your settings and save the captured material accordingly.

To prepare the video channel for a slave mode record perform the following:

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section "Preconfiguring the VENICE Client Software" on page 2-15).

- If necessary, configure the input format so that it matches the signal present at the server's input with the **INPUT SETTINGS** items (see section "Configuring the Input Settings" on page 5-3).
- Determine a file name and path for the file(s) to be recorded with the **DESTINATION** items as described in section "Selecting the Storage Location and File Name" on page 5-7.
- If necessary, specify the essences that you want to record with the **INPUT SELECT** items (see section "Selecting Essences for Record" on page 5-5).
- If necessary, set up the file format(s) of the file(s) to be recorded via the **OUTPUT SETTINGS** items (see section "Configuring the Output Settings (File Settings)" on page 5-6).
- In case you want to record on Avid's ISIS or Interplay (file format `MXF (for ISIS & Interplay)`), you can specify metadata for the recorded files with the **METADATA** items (see also section "Avid Workflow" on page 2-22).
- Then select the protocol that should be used for the slave mode and press the button **RMT OFF** (see section "Slave Mode" on page 2-12).

After this the button will be labelled **RMT ON** indicating that the slave mode is activated. Then the VENICE server waits for a record command to begin the capturing of the signal present at the input of the VENICE server.

To terminate the slave mode record perform the following:

- Either send the respective command or terminate the slave mode by clicking on the remote button again (i.e. deactivate the button **RMT ON**).

This stops the slave mode capturing process right away.

5.6.5 Recording a Batch

In the ingest mode you can record a batch list when switching to the batch record mode (see section "Recorder Controls (VENICE)" on page 5-14). With it you can perform several autoedit records in a single step:

– How to set up an autoedit record is described in section "How to Autoedit Record with the VENICE Server" on page 5-19.
– How to create and use a batch list is described in section "The List Editors" on page 7-3.

When a batch record is started via the record button ( ) of the controls, the software internally sorts the batch list in C-mode first (i.e. by tape name and source inpoint). Then it records the items in

this order and you will be informed about the progress in a special window:

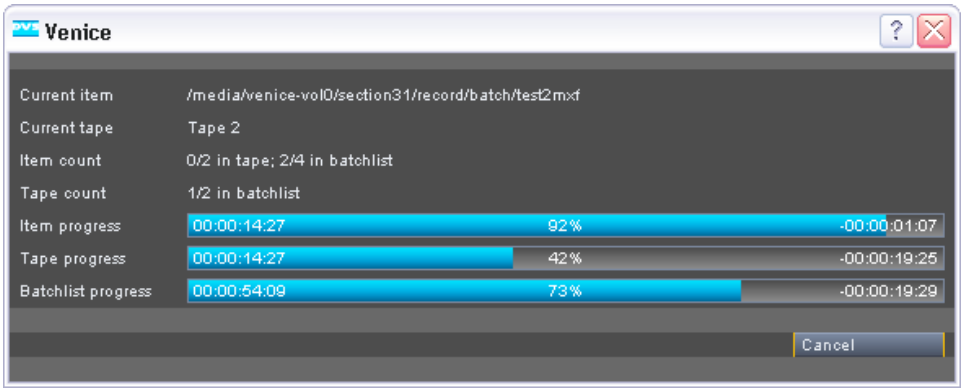


Figure 5-13: Progress of a batch record

If different tape names have been defined for the items to be recorded (see section "Configuring the Input Settings" on page 5-3), you will be asked by the software to insert the respective tape each time another tape has to be recorded.

5.6.6 Read While Write

With VENICE you can access the already saved material of a clip while it is still being recorded, often also called 'read while write'. With this you can, for instance, play out the already saved part of a clip or use it for transcoding (e.g. for subclipping). The file formats that can be used for read while write are all still image formats and the container file formats saved with MXF OP-1a (e.g. DVSCPRO or DNxHD; see also section "Supported File Formats" on page A-3).

Read While Write with Still Image Formats

When loading a clip of a still image format while it is still being written, only the video up to the frame that was already recorded at the time of the clip loading will be shown in the VENICE client software. To get the last recorded material you have to load the clip anew.

Read While Write with Container File Formats (MXF OP-1a)

At the start of the record, when a container file format in MXF OP-1a is used, the duration as specified for the ingest will be set in the metadata of the container. If no duration is set, by default 1 hour will be assumed.

When loading this clip while it is still recorded, the timeline in the VENICE client software will show you the complete duration as detailed

in the metadata. If data has not been recorded yet, the frame that was last played out of this clip will be output.

Because of this behavior, when scrubbing the timeline in a part where no material is available yet, it may seem as if there is video recorded although there is not.

When your record is longer than the duration stored in the metadata (e.g. when no duration was specified), to get the last recorded material you have to stop the record which will update the metadata, and then load the clip anew.

Transcoding Clips

With a connection to a video channel of the VENICE server established (see section “Getting Started” on page 2-3) you can use this channel for transcoding. For this the VENICE client software must be in the **TRANSCODE MODE** (see section “Selecting an Operation Mode” on page 2-9).

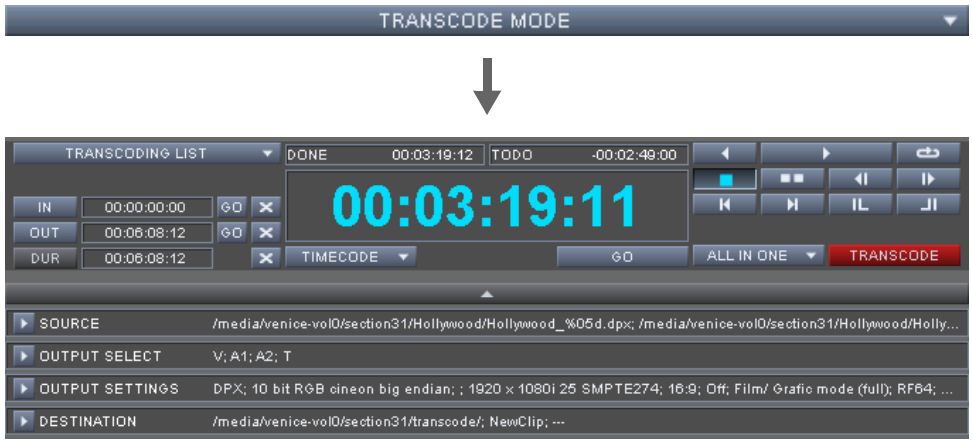


Figure 6-1: Controls and configurations of the transcode mode

In the transcode mode you can convert video and audio material to different file formats. If possible, the file conversion will be performed in hardware at a faster render speed.

This chapter describes how to transcode clips on the VENICE server with the VENICE client software.

Because most items of the transcode mode are identical and can be used in the same way as the ones available in the play-out or ingest mode, this chapter describes the differences only.

6.1 Controls Available for a Transcoding

This section describes shortly the controls and settings items that are available for a transcoding exclusively. The remaining items can be used the same way as already described for the playout and ingest mode (see chapter “Playing Out Clips” on page 4-1 and chapter “Recording Clips” on page 5-1).

6.1.1 Configuration Items

As with the other operation modes, before a transcoding can be performed you have to set up the operation (see also section “Configuring the Operation Mode” on page 2-9). It has to be performed same way as for the playout or ingest mode. This section describes the settings items that are available for a transcoding exclusively.

SOURCE

With the source settings you determine the clips that should be transcoded/converted. In case 'single item' is selected from the controls, the selected content can be added to a transcoding list:

This button appends the clips that are selected in the entry fields to the left to the list. If video and audio are both available, they will appear as linked items in the list. With only a single item selected, only this item will be added to the list.

Inserts the clips that are selected in the entry fields to the left in the list above the item that is currently selected in the list. If video and audio are both available, they will appear as linked items in the list. With only a single item selected, only this item will be added to the list.

Further information about lists and how to use them can be found in section “The List Editors” on page 7-3.

OUTPUT SELECT

These items set the essences that should be converted to the other file format.

OUTPUT SETTINGS

With these settings you set the file format that the selected clips should be converted to:

Use the **Target resolution** setting to configure the video raster that the target video clip should provide.

The **Auto scale** combo box enables you to scale and resize your original video material:

– With the combo box **Auto scale** set to `Fit` the original material will be scaled to its maximum allowable width or height so that no information gets lost. If the aspect ratio is different, you will receive black bars in the target files.
– With this combo box set to `Crop` the images will be scaled to their maximum allowable width or height so that you receive a full image at the output. If the aspect ratio is different, parts of the images will be cropped.
– With the combo box **Auto scale** set to `Box`, the aspect ratio will not be preserved. The resulting images will be stretched or compressed if the aspect ratio is different and you will always receive a full image in the target files.
– With the **Auto scale** combo box set to `Off`, the material will maintain its original size.

The **Timecode settings** determine the timecode that will be written as the generic source timecode into the headers of the target files (if supported by the file format, see also section “About Source Timecode” on page 2-21).

Destination

With these settings you determine the storage location of the files to be created.

6.1.2 Player Controls

The player controls in the transcode mode can be used, for example, to play out the items that are currently selected as the source. They perform the same actions as the player controls in the playout mode (see section “Player Controls (VENICE)” on page 4-14). The following user interface items are available for transcoding only:

For the items of a transcoding list you can specify different configurations (e.g. file formats) for the transcoding. Further information about lists and how to use them can be found in section “The List Editors” on page 7-3.

You can select between the transcoding of a single item or a transcoding list with this combo box (see section “Using Lists” on page 7-3).

With this combo box you determine the transcoding mode of a transcoding list. If set to `ALL IN ONE`, all clips of the transcoding list will be transcoded into a single file. If set to `BATCH`, separate files will be created for the clip items on the list. For the latter you can specify different configurations (e.g. file formats) for the individual items to be created.

Once your transcoding is set up correctly you can start the operation with this button. Then it changes its appearance to its active state and the transcoding begins. In case it is necessary to terminate the transcoding manually, you have to click the button again.

6.2 Transcoding with the VENICE Server

In the transcode mode (see section “Selecting an Operation Mode” on page 2-9) you can play out the currently selected content and convert it to a different file format. To start a transcoding perform the steps as described below:

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 2-15).

- Select the video and audio content that should be transcoded with the **SOURCE** items as described in section “Selecting Content for Play-out” on page 4-2.
- Determine a file name and path for the file(s) to be created with the **DESTINATION** items as described in section “Selecting the Storage Location and File Name” on page 5-7.
- If necessary, specify the essences for the transcoding with the **OUTPUT SELECT** items (see section “Selecting Essences for Play-out” on page 4-6).
- If necessary, configure the output format to your requirements with the **OUTPUT SETTINGS** items (see section “Configuring the Output Settings” on page 4-7).
- If wanted, set an in-/outpoint or duration for the content to be transcoded (see section “Player Controls (VENICE)” on page 4-14).
- If wanted, you can use the play button ( ) of the controls to play out the content to be transcoded, for example, for a final check.
- Once the play-out is stopped, you can start the transcoding by pressing the transcode button (TRANSCODE) of the controls.

The VENICE server will then start the transcoding and as an indication for this the characters of the position field turn red. The video overlay will show you the source that is transcoded (without scaling). The area of the scrub/shuttle bar below the video overlay will show you the progress of the transcoding in a progress bar:

Figure 6-2: Progress of a transcoding

Once the progress bar reaches 100% the transcoding is finished and the operation will be stopped. You can terminate the transcoding manually whenever you want by clicking the transcode button again.

The Tool Area

When the tab of a video channel is selected, you can find to the right the tool area offering several tools, for example, to administer playlists, batch record lists or transcoding lists, or to adapt the streamed audio heard at your workstation.

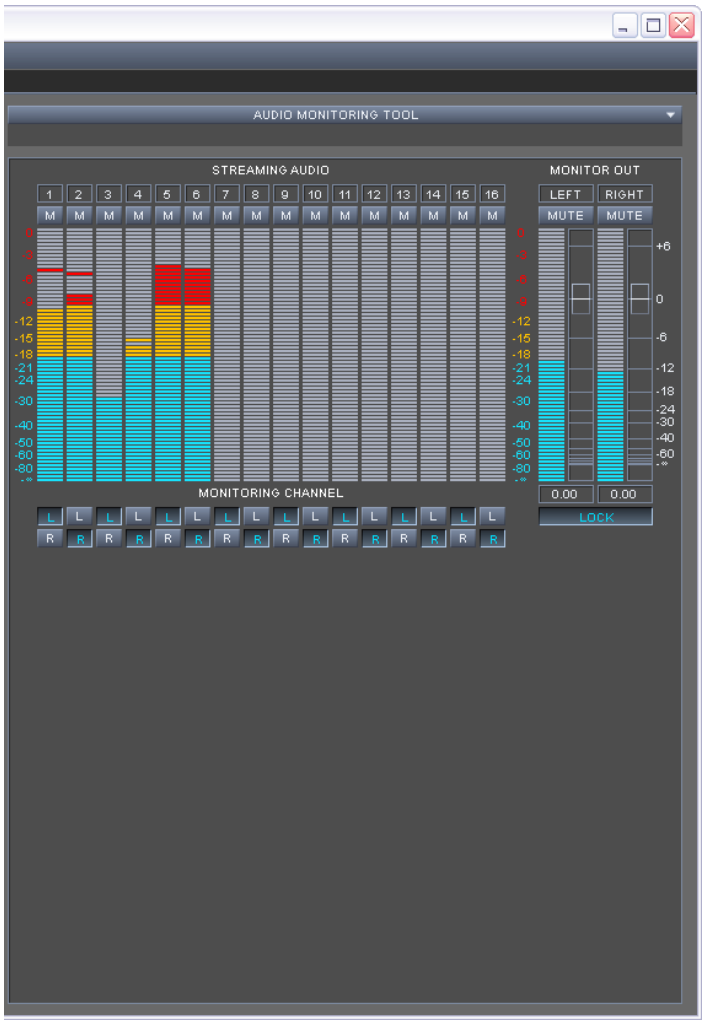


Figure 7-1: The tool area

This chapter explains the tools available in this area in detail.

7.1 Switching between the Tools

The list editors as well as the other available tools can be displayed with the tools selection combo box at the top right of the tool area:

Figure 7-2: Switching between tools

Once a tool has been selected, it will be displayed in the tool area.

The type of list editor that can be selected from this combo box depends on the currently activated operation mode (see also section “The List Editors” on page 7-3).

7.2 The List Editors

With the list editors you can administer and create playlists, batch record lists or transcoding lists. Although the various lists are based on the same format, each list can best be administered in the list editor of its respective operation mode (see section “Selecting an Operation Mode” on page 2-9):

For further information about playlists, batch lists and transcoding lists see section “Playlists, Batch Lists and Transcoding Lists” on page 2-16.

– The playlist editor is available in the **PLAYOUT MODE**.
– The transcode list editor is available in the **TRANSCODE MODE**.
– The batch list editor is available in the **INGEST MODE** (after the batch record mode has been selected, see section “Recorder Controls (VENICE)” on page 5-14).

In each operation mode the provided list editor (see section “Switching between the Tools” on page 7-2) offers different functions as well as other columns.

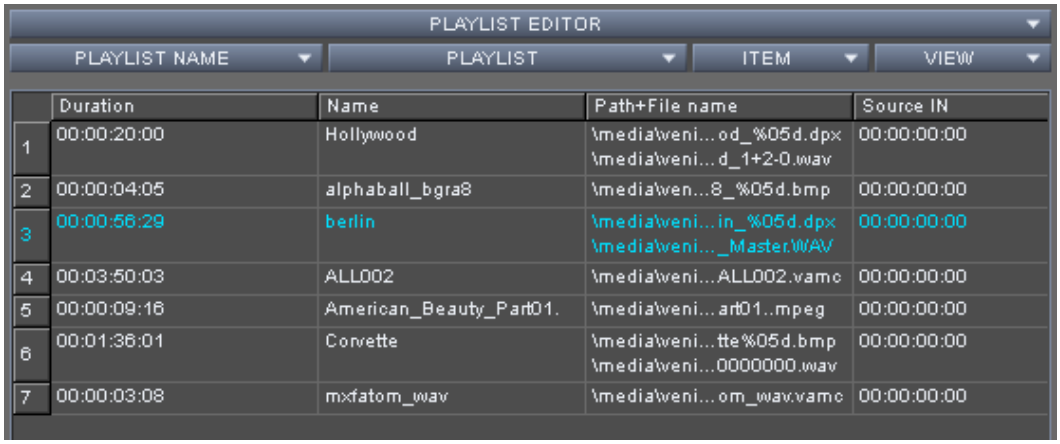


Figure 7-3: Playlist list editor

This section describes the list editors in detail.

7.2.1 Using Lists

Playlists, batch record and transcoding lists are interchangeable, meaning they are based on the same format and can be used in all operation modes (see section “Selecting an Operation Mode” on page 2-9).

In the **PLAYOUT MODE** and the **TRANSCODE MODE** you can find among the player/recorder controls at the top left a combo box where you can specify whether a list should be processed or single video/audio clips:

Figure 7-4: Switching between single clips and playlist/transcoding list

In the playout mode you can also determine with a button that only the currently displayed clip of a playlist should be played out (see section "The Controls Explained" on page 4-15).

In the batch record mode of the **INGEST MODE** (see section "Recorder Controls (VENICE)" on page 5-14) you can select whether the complete list or just the selected items of the list should be processed:

Figure 7-5: Switching between selection and batch record list

Nevertheless, to process a list it has to be opened and selected in the list editor first (see section "General Administration" on page 7-5).

7.2.2 Adding Items to a List

In the **PLAYOUT MODE** and the **TRANSCODE MODE** there are several possibilities to add items to a list:

– Single items selected in the **SOURCE** settings of the respective operation mode can be either inserted or appended to a list with the buttons to the right of the entry fields:

This way you can also prepare the respective clip beforehand, for example, by determining an in- and outpoint for the selected clip or setting its play-out speed.

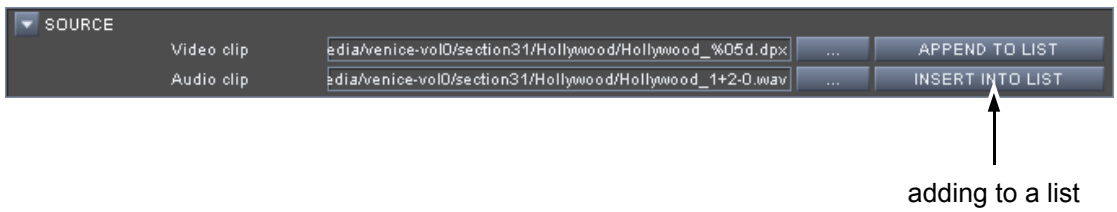


Figure 7-6: Adding single clips to a list

– Clips can be inserted or appended via a dialog window by using the respective menu options of the combo box **ITEM**. It opens the same window as used, for example, to select content in the playout mode

(see section "Selecting Content Via a Dialog Window" on page 4-4).

– Clips can be dragged and dropped from Spycer (similar as described in section "Selecting Content Via Spycer" on page 4-4). They can be dropped directly at the desired position in the list editor.

In the batch record mode of the **INGEST MODE** you can append the currently set autoedit record operation (tape name, inpoint, outpoint, destination, etc.) to a list with the button at the lower right of the player controls:

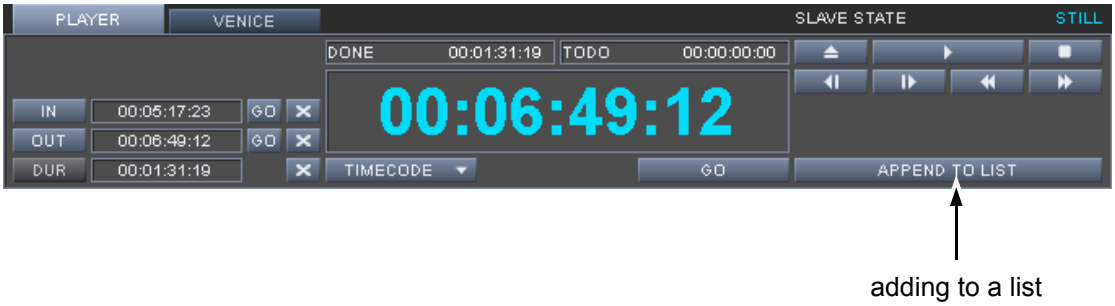


Figure 7-7: Adding an item to a batch list

How to set up an autoedit record is described in section "How to Autoedit Record with the VENICE Server" on page 5-19.

7.2.3 General Administration

Playlists, batch record and transcoding lists can be created and administered with the items at the top of a list editor:

Figure 7-8: Administering lists in general

With the combo box to the left you can select already saved or opened lists by their name. The respective list will then be displayed in the list editor.

With the combo box to the right the list can be administered. It provides the following possibilities:

New...	Starts a new list.
Open...	Opens a stored list from a file. Afterwards it can be selected from the drop-down list of the combo box to the left. In the batch list editor you can also open an EDL (edit decision list, types GVG or CMX) or an ALE (Avid Log Exchange) file and import it as a batch list. Any missing information that is required for the batch will be taken from the configuration settings. When opening a file in the batch list editor, the input video format has to be set to the correct video raster and frame rate.
Save... / ***Save as...***	Saves the currently displayed list to a file.
Rename...	Renames the currently displayed list.
Delete... / ***Close***	Closes the currently displayed list, i.e. it is closed and removed from the drop-down list of the combo box to the left.
Delete all... / ***Close all***	Closes all lists in a single step, i.e. all opened lists are closed and removed from the drop-down list of the combo box to the left.

7.2.4 Administering a List

Once items are available on the list, they can be administered and edited in several ways. For example, via drag and drop the sequence of the columns of the table can be changed as well as the sequence of the items displayed on the list. The item that is currently displayed in the video overlay and/or in the configuration settings is marked in blue.

The user interface provides with the items at the top further possibilities:

playlist/transcoding list editor

batch list editor

Figure 7-9: Administering the displayed list

ITEM (Playlist/Transcoding List Editor)

With the menu options of the combo box **ITEM** of the playlist or transcoding list editor you can administer the items on the list. It provides the following menu options:

Append...	Opens a dialog window to append a clip to the list.
Insert...	Opens a dialog window to insert a clip above the item that is currently selected in the list.
Load item into player	Loads the currently selected item in the list for a play-out in the main user interface of the VENICE client software.
Link items	If a video and an audio clip are selected in the list, they can be linked to a single item with this menu option.
Unlink items	If a linked item is selected in the list, it can be separated into its video and audio component with this menu option.
Select all	Selects all items in the currently displayed list.
Remove selection	Removes a selection.
Delete	Deletes the currently selected items from the list.
Delete all	Deletes all items from the currently displayed list.

ITEM (Batch List Editor)

With the menu options of the combo box **ITEM** of the batch list editor you can administer the items on the list. It provides the following menu options:

Select all	Selects all items in the currently displayed list.
Deactivate active item	Deactivates the blue marking of an item in the list. Changes made in the configuration settings will not be applied to the item anymore.
Slip source timecode	Allows you to change the source timecode of the selected item, i.e. to change the in- and outpoint by an offset without changing the duration of an item.
Slide source timecode	Allows you to change the source timecode of the selected item, i.e. to change the in- and outpoint independently from one another with offsets.

Set to offline	Items marked as 'ONLINE' are already captured and linked to video/audio material. Items that have not been captured so far or where source material could not be found are marked as 'OFFLINE'. This menu option sets the selected item to 'OFFLINE'.
Delete	Deletes the currently selected item from the list.

VIEW / LIST

With the combo box **VIEW** (playlist/transcoding list editor) or **LIST** (batch list editor) you can adapt the appearance of the items in the list to your liking:

Thumbnail	Switches on the thumbnail view. Then a further column will be displayed in the list that shows the first frame of the item as a thumbnail.
List	Switches on the list view without thumbnails.

7.2.5 The Context Menus

For additional configuration and editing there are context menus available. They are explained in this section.

Context Menu of List Items (Playlist/Transcoding List Editor)

The context menu invoked on a list item of the playlist or transcoding list editor provides further possibilities to administer and edit the items on a list.

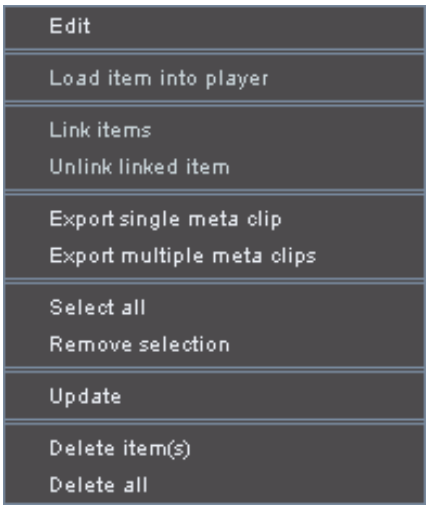


Figure 7-10: Context menu of a list item in the playlist/transcoding list editor

Several of these menu options can also be found on the menu of the combo box **ITEM** of the playlist or transcoding list editor (see section "Administering a List" on page 7-6). They are named similar and provide the same functionality. The following table explains the ones that can be found on the context menu only:

Edit	If available, this menu option allows you to edit the respective field where the context menu has been invoked in the list directly. Alternatively you can set the focus to this field and use the keyboard shortcut [F2].
Export single meta clip	Exports the selected item(s) as a single meta-clip. They will be detailed in the metaclip in the same sequence as they are present in the list.
Export multiple meta clips	For each of the selected items a single metaclip will be created.
Update	Updates the list, e.g. the presence of the items on the storage will be checked and their thumbnails will be updated.

Context Menu of List Items (Batch List Editor)

The context menu invoked on a list item of the batch list editor provides further possibilities to administer and edit the items on a list.

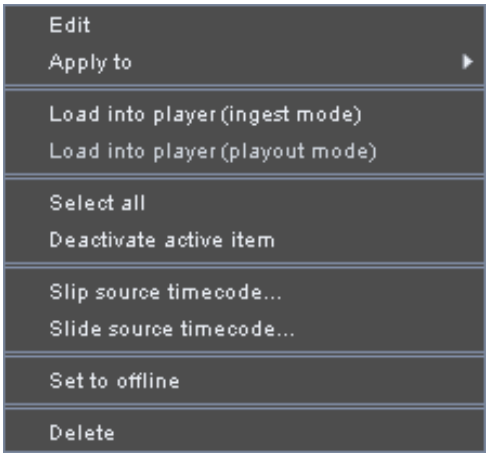


Figure 7-11: Context menu of a list item in the batch list editor

Several of these menu options can also be found on the menu of the combo box **ITEM** of the batch list editor (see section "Administering a List" on page 7-6). They are named similar and provide the same func-

tionality. The following table explains the ones that can be found on the context menu only:

Edit	If available, this menu option allows you to edit the respective field where the context menu has been invoked in the list directly. Alternatively you can set the focus to this field and use the keyboard shortcut [F2].
Apply to	Applies the value of a field to other offline items in the list. You can select between all offline items or the selected offline items only.
Load into player (ingest mode) / ***Load into player (playout mode)***	Loads the item where the context menu has been invoked into the player of the respective operation mode. Offline items can be loaded in the player controls of the **INGEST MODE** (i.e. for the external device) and online items in the player controls of the **PLAYOUT MODE** (playout mode will be automatically activated).

Context Menu of Column Headings

With the context menu invoked on a column heading you can adapt the table, i.e. select the columns that should be displayed.

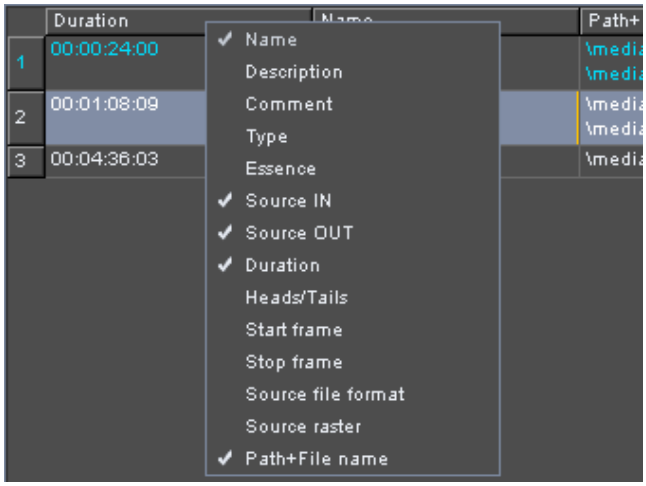


Figure 7-12: Context menu of a column heading

The columns that can be displayed for the list depend on the type of list editor that is currently active. Select or deselect the columns that should be displayed for the list. The sequence of the columns can be changed via drag and drop.

7.3 Audio Monitoring

When playing out with the VENICE client software, the audio is streamed via network to the client where the VENICE client software is installed. The audio monitoring tool (see section “Switching between the Tools” on page 7-2) allows you to adapt the streamed audio that can be heard at your workstation to your liking.

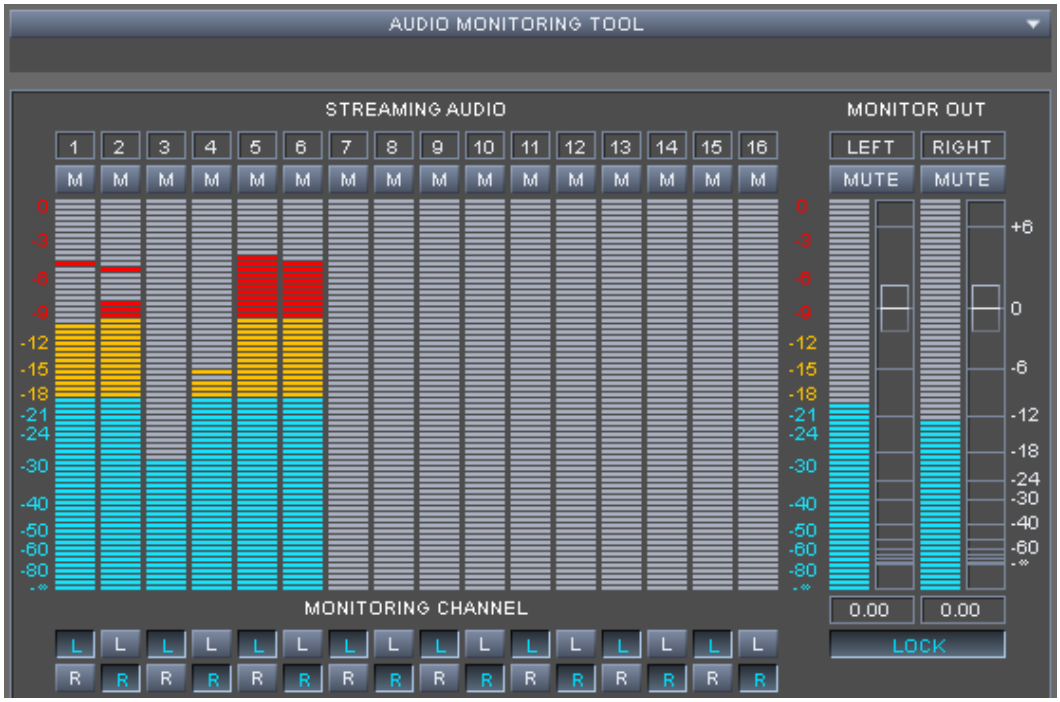


Figure 7-13: Audio monitoring tool

This section describes the audio monitoring tool in detail.

If the VENICE client software is installed on a remote system, the Spycer application running there should be fully licensed. Otherwise the data streamed to the remote system will not be bandwidth optimized and audio will not be available.

7.3.1 Using the Audio Monitoring Tool

The peakmeter of the audio monitoring tool shows you the streamed audio graphically. It indicates the 16 channels of audio that the video channel can provide.

With the **M** button (M) at the top of each channel peakmeter the channel can be muted. The **L** (L) and **R** (R) buttons at the bottom

indicate where the channel will be routed to at your workstation (left or right):

State of … (+ activated, – deactivated)		**Result**
Button L	**Button R**	
+	–	left channel
–	+	right channel
+	+	left and right (mono)
–	–	mute

The volume that can be heard at your workstation can be controlled with the **MONITOR OUT** items to the right:

	Mutes either the left or the right channel heard at your workstation.
slider	Allows you to adjust the volume of the audio with the mouse. For this you can also use the scroll wheel with the mouse cursor placed over a slider. The slider steps made with the scroll wheel can be adjusted by pressing the [Shift], [Ctrl] or [Alt] key simultaneously.
	The volume can also be adjusted by entering a value in these entry fields.
	When this button is activated, the volume controls of the left and right channel are locked together and they will both be adjusted simultaneously. If deactivated, the left and right channel can be adjusted individually.

The Menus

At the top of the user interface you can see a menu bar.

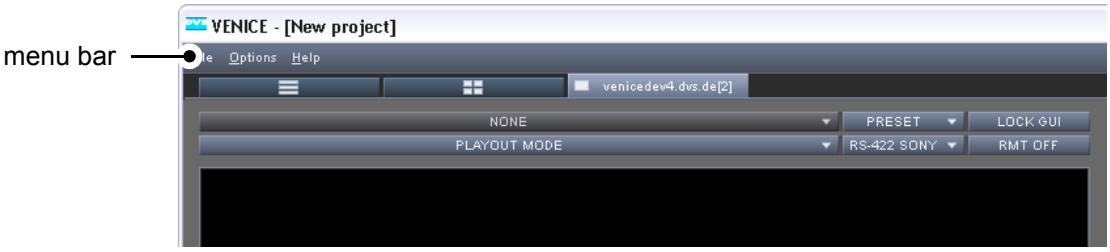


Figure 8-1: Menu bar of the VENICE client software

This menu bar provides access to functions of a more general nature for the VENICE client software. Here you can find, for example, options to expand or collapse the operation mode configurations or reset the dropped frames counter.

This section describes the menu bar of the user interface.

The availability of the menu options depend on the type of tab that is selected. Most will be available when a video channel tab is active.

8.1 The 'File' Menu

The menu ***File*** contains the following menu option:

Figure 8-2: The 'File' menu

For further information about project files see section "Projects" on page 2-16.

New	Starts a new project and loads the default settings of the software.
Open...	Allows you to select a project file and open it in the software.
Recent files	Details the recently opened project files.
Disconnect	Disconnects and frees the video channel (see section "Disconnecting and Freeing a Video Channel" on page 2-14).
Resolve	Dissolves a channel group (see section "Dissolving a Channel Group" on page 3-9).
Save	Saves the currently opened project.
Save as...	Allows you to save the currently opened project under a different name and/or location.
Exit	Closes the user interface of the VENICE client software.

8.2 The 'Options' Menu

The ***Options*** menu provides menu options to set and configure either the VENICE client software or a video channel. In detail it contains the menu options shown below:

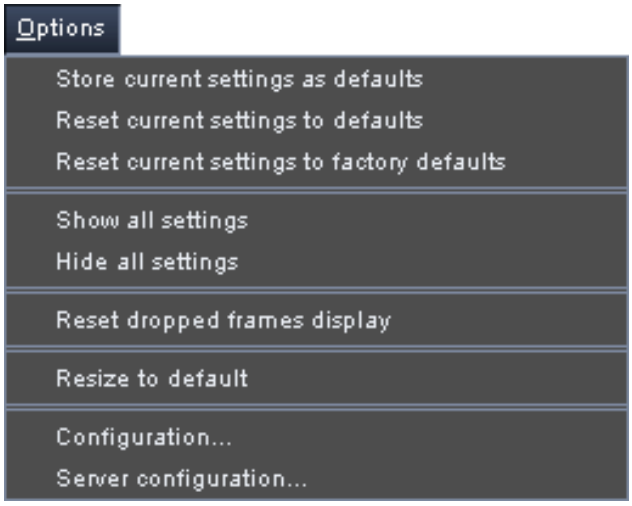


Figure 8-3: The 'Options' menu

Store current settings as defaults	Stores the layout of the software as well as the configuration settings as default settings for new projects (see section "Defaults" on page 2-16).
Reset current settings to defaults	Sets the current layout and configurations back to the settings that are stored as defaults for new projects.
Reset current settings to factory defaults	Sets the current layout and configurations back to the settings that were defined by DVS as defaults for new projects.
Show all settings	Expands all operation mode configurations in a single step. This can also be performed with the context menu of a collapsed triangle button (see section "Configuring the Operation Mode" on page 2-9).
Hide all settings	Collapses all expanded operation mode configurations in a single step. This can also be performed with the context menu of an expanded triangle button (see section "Configuring the Operation Mode" on page 2-9).

Reset dropped frames display	Resets the dropped frames counter (see section "Information Area" on page 4-13). It will be set back to zero and the indication of dropped frames will no longer be displayed in the user interface.
Resize to default	Resizes the user interface to its default size again.
Configuration…	Opens a window to set configurations. Most are valid for a single video channel. See "VENICE Administration and Configuration" user guide.
Server configuration…	Opens a window to set server configurations. See "VENICE Administration and Configuration" user guide.

8.3 The 'Help' Menu

With the menu options of the menu ***Help*** you can get, for example, additional information about the VENICE client software. It contains the following menu options:

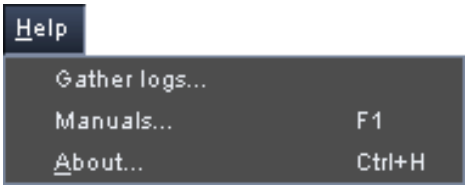


Figure 8-4: The 'Help' menu

Gather logs...	Gathers log files from the server which detail the actions performed by and with the VENICE server. You may get asked by the DVS service department to send in these files as well as others in case of problems with VENICE. They will be saved at a location of your choice in an archive file.
Manuals...	Accesses the online documentation of VENICE. It opens an overview page in HTML format. The manuals are also available in PDF format which is suited best if you want to print out the document.
About...	Displays further information about the VENICE client software, for example, the precise version number of the software or additional license information.

Appendix

This chapter provides further information about the software. Among others you can find here lists of the available keyboard shortcuts and the file formats that are supported directly by the DVS software.

A.1 Keyboard Shortcuts

For a more easy and a faster control of the VENICE client software there are various keyboard shortcuts available which are listed in the tables below:

For the shortcuts to work the focus must be set correctly. It should be on the controls in general or the scrub/shuttle bar.

Table A-1: General keyboard shortcuts

Action	Shortcut
Update list (channel connection tab)	[F5]
Switch between operation modes	[Ctrl + Shift + TAB]
Switch between player/recorder controls	[Ctrl + TAB]
Start record (crash and autoedit)	[Ctrl + Shift +R]
Play (speed 1)	[Space], [L], [5], [']
Stop play (speed 0)	[Space], [K]
Step one (1) frame backward	[Left Arrow], [3], [,]
Step one (1) frame forward	[Right Arrow], [4], [.]
Set inpoint	[E], [I]
Set outpoint	[R], [O]
Delete inpoint	[D]

Table A-1: General keyboard shortcuts (cont.)

Action	Shortcut
Delete outpoint	[F]
Delete in- and outpoint	[G]
Go to inpoint	[Q]
Go to outpoint	[W]
Append to list	[B]

Table A-2: Keyboard shortcuts for VENICE

Action	Shortcut
Reverse play-out (speed -1)	[J]
Stop reverse play (speed 0)	[Space], [K]
Go to previous point	[Home], [A]
Go to next point	[End], [S]

Table A-3: Keyboard shortcuts for the external device

Action	Shortcut
Eject tape	[N]
Fast backward	[1], [M]
Fast forward	[2], [/]
Stop fast backward/forward	[Space]

A.2 Supported File Formats

The DVS software supports over 100 graphic and image file formats. Most are made available by a special library. For a list of all these file formats see `http://www.xnview.com/en/formats.html`.

The tables in the following list the file formats that are supported by the DVS software directly. Some are video or audio-only file formats and some are container file formats that contain audio as well as video.

Some of the file formats (especially the compressed ones) can be used with a single video channel of the VENICE server only. A simultaneous processing with a further video channel may lead to drops.

Video-only File Formats

The following video-only file formats (still image formats) are supported by the VENICE server:

Format Name	Default Extension	File storage format	Description
BMP	*.bmp	3 × 8 bit RGB and 4 × 8 bit RGBA	8 bit RGB file format with or without key. Windows bitmap format. Only uncompressed bitmaps are supported (no RLE compression).
Cineon[1]	*.cin	3 × 10 bit RGB	10 bit RGB format. Subset of the ANSI/ SMPTE DPX file format. Flexible file format by Kodak, allowing for variable image headers.
DPX[1, 2]	*.dpx	3 × 8 bit RGB and 4 × 8 bit RGBA	8 bit RGB file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		8 bit YUV 4:2:2 and YUVA 4:2:2:4	8 bit YUV file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 10 bit RGB and 4 × 10 bit RGBA	10 bit RGB file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		10 bit YUV 4:2:2 and YUVA 4:2:2:4	10 bit YUV file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 12 bit RGB	12 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 16 bit RGB	16 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.

Format Name	Default Extension	File storage format	Description
JPEG2000	*.jp2 *.jpc	8 bit YUV	8 bit YUV file format. Flexible data and still image compression standard, operating either compressed or uncompressed.
		3 × 10 bit RGB	10 bit RGB file format. Flexible data and still image compression standard, operating either compressed or uncompressed.
		10 bit YUV	10 bit YUV file format. Flexible data and still image compression standard, operating either compressed or uncompressed.
		3 × 12 bit RGB	12 bit RGB file format. Flexible data and still image compression standard, operating either compressed or uncompressed.
		3 × 12 bit XYZ	12 bit XYZ file format. Flexible data and still image compression standard, operating either compressed or uncompressed.
Targa	*.tga	3 × 8 bit RGB, 4 × 8 bit RGBA and 8 bit Luma	Targa image format. Only uncompressed variants of this format are supported.
TIFF	*.tif *.tiff	3 × 8 bit RGB, 4 × 8 bit RGBA and 8 bit Luma	TIFF or Tagged Image File Format in 8 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported.
		3 × 12 bit RGB, 4 × 12 bit RGBA and 12 bit Luma	TIFF or Tagged Image File Format in 12 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported.
		3 × 16 bit RGB, 4 × 16 bit RGBA and 16 bit Luma	TIFF or Tagged Image File Format in 16 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported.

Format Name	Default Extension	File storage format	Description
YUV	*.qnt *.qtl *.yuv *.yuv8	8 bit YUV 4:2:2	Raw 8 bit YUV file format.[3] This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Component order UYVY.
	*.yuv10	10 bit YUV 4:2:2	Raw 10 bit YUV file format. This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Component order UYVY. Bits are packed tightly from left to right for three component samples, then two bits of padding (zero) to fill up to four bytes. The lines are padded to a multiple of four bytes. The file is padded to a multiple of 512 bytes.
	*.yuv16	16 bit YUV 4:2:2	Raw 16 bit YUV file format.[4] This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Each component is stored as a 16 bit value in big-endian byte order (left-aligned). Component order UYVY.

1) DVS saves files of this format by default in big-endian byte order. However, for a play-out both formats (little- and big-endian byte order) are supported.
2) Regarding the file type: V2 is the DPX file format according to SMPTE 268M-2003, the remaining (V1) are SMPTE 268M-1994. 'b.e.' stands for big endian, 'l.e.' for little endian.
3) 8 bit YUV422: 8 bit per component, 16 bit average per pixel.
4) 16 bit YUV422: 16 bit per component, 32 bit average per pixel.

Container File Formats

The DVS software supports the following container file formats for audio and/or video material:

Format Name	Default Extension	File storage format	Description
MPEG-2	*.mpg	3 × 8 bit RGB or 8 bit YUV (compressed + audio)	File format for the compression of video and audio.
QuickTime	*.mov	Various (e.g. RGB or YUV either compressed or uncompressed + audio)	Video file format that supports various file storage formats, either compressed or uncompressed. Proprietary streaming video technology developed by Apple.

Furthermore, the software supports different variants of MXF (e.g. MXF OP-Atom, MXF OP-1a and P2; extension *.mxf) as well as DV (DIF; extension *.dv) files. Both are container formats for audio and/

or video material. They are implemented with the following compression codecs:

Codec	Video Raster[1]	Video Bit Rates	Audio Bit Depth[2]	Format
XDCAM IMX	525i /29.97, 625i /25	30, 40 or 50	16 bit, 24 bit	MXF OP-1a
XDCAM HD	1080i, p /25/29.97 (4:2:0)	18, 25, 35	16 bit	MXF OP-1a
	720p /50/59.94, 1080p /23.98/25/29.97, 1080i /25/29.97	50	24 bit	
XDCAM DV	525i /29.97 (4:1:1), 625i /25 (4:2:0)	25	16 bit	MXF OP-1a
DV25	525i /29.97 (4:1:1), 625i /25 (4:2:0)	25	16 bit	DV (DIF), MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &…)
DVCPRO 25	525i /29.97 (4:1:1), 625i /25 (4:1:1)	25	16 bit (OP-1a: also 24 bit)	DV (DIF), MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &…)
DVCPRO 50	525i /29.97, 625i /25	50	16 bit (OP-1a: also 24 bit)	DV (DIF), MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &…)
DVCPRO HD	720p /50/59.94, 1080i /25/29.97	100	16 bit (OP-1a: also 24 bit)	DV (DIF), MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &…)
AVC-Intra	720p /23.98/25/29.97/50 /59.94, 1080i /25/29.97, 1080p /23.98/25/29.97	50, 100	16 bit (OP-1a: also 24 bit)	MXF OP-1a, MXF OP-Atom (P2)
DNxHD	720p /23.98/25/29.97 /50/59.94, 1080i /23.98/24/25 /29.97, 1080p /23.98/24/25 /29.97/50/60	Various, ranging from 36 to 440	16 bit, 24 bit[3]	MXF OP-1a (Avid), MXF OP-Atom (Avid), MXF (for Isis &…)

1) If not mentioned otherwise all in 8 bit 4:2:2.
2) The number of channels that can be recorded as well as their arrangement may be restricted.
3) Each audio channel will be recorded in a separate file. Recording 16 audio channels will generate 16 individual MXF files for audio (mono).

Audio-only File Formats

The following uncompressed audio-only file formats are supported by the DVS software:

Format Name	Default Extension	Description
AIF AIFF	*.aif *.aiff	Audio interchange format. Platform-independent file format for sound. Capable of storing multiple mono or stereo channels.
BWF	*.rf64 *.wav	Broadcast wave format. Platform-independent file format for sound. Extension of the Wave format capable of storing multiple mono or stereo channels together with metadata and enabling file sizes of more than 4 GB.
Wave	*.wav	File format for digital audio (waveform) data under Windows. Capable of storing multiple mono or stereo channels.

A.3 States of an External Device

An externally connected device can go into different states that are all shown in the **SLAVE STATE** field of the user interface (see section "Information Area" on page 4-13). You can control an external device via the remote output of the DVS system, such as telecines, VTRs or digital disk recorders. The following shows the most important statuses that will be displayed by the DVS software:

OFFLINE	No external device connected
STANDBY	Device is in standby mode
LOCAL	External device is controlled from its own operation panel; all RS-422 commands are ignored
STILL	Tape has stopped but is still threaded with the video drum head turning (standby on)
STOP	Tape has stopped and is unthreaded, the video drum head has stopped as well (standby off)
EJECT	Device is ejecting the tape
REWIND	Tape is rewound
FORWARD	Tape is fast forwarded
RECORD	Device is recording
PLAY	Device is playing out
JOG	Tape is forwarded or rewound (speeds (±) 0.1 to 1)
SHUTTLE	Tape is fast forwarded or rewound (speeds (±) 1.1 to 10)
PREROLL	Device is performing the preroll

Additionally, some error messages are available and the following ones can be displayed by the DVS software:

TAPE UNTHREAD	No tape loaded
TAPE TROUBLE	A tape error has occurred
HARD ERROR	A hardware error has occurred

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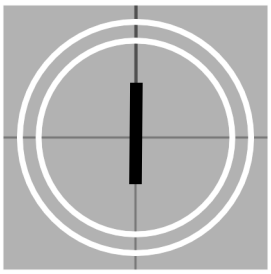

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